

**Responses to Technical NOD #1**  
**OxyChem Ingleside Plant**  
**Part B Permit Renewal Application**  
**Permit No. 50322**  
**RN100211176 / CN600125256**  
**Tracking No. 31806930**

**Deficiency ID Number C1**

An editable version of the 2014 Part B Permit Renewal Application was not available for this renewal application. As such, a redline/strikeout version could not be included with the original renewal application. A redline/strikeout version of any changes to Revision 0 and Revision 1 of the Part B Permit Renewal Application has been provided with this submission.

**Deficiency ID Number T1**

The facility name in Section I.A of the TCEQ Part A Application (TCEQ-0283) form has been changed to “OxyChem Ingleside Plant”.

**Deficiency ID Number NT1**

The Type of Application Submittal in Section I.E of the TCEQ Part A Application (TCEQ-0283) has been changed from “Revision” to “Initial”.

**Deficiency ID Number NT2**

Table III-2 of the TCEQ Part A Application (TCEQ-0283) has been revised to indicate that the “Date in Service” for tanks C-720A and C-720B is 1990. The Number of Years Utilized for these tanks were changed accordingly.

**Deficiency ID Number NT3**

Part A Table III-2 and Table V.A in Attachment V.A of the Part B Permit Renewal Application were revised to include the requested information for Tank 6D-02 and the WW Sludge Container Storage Area.

**Deficiency ID Number NT4**

The USGS Map contained in the Part A Application Attachment C and in the Part B Application Attachment V.A Figure 1 was changed to indicate that the status of Tank 6D-02 and the Chlor-Alkali Container Storage Area are “Closed”. The Emergency Equipment Location Map in Attachment III.E-2 of the Contingency Plan was also modified to indicate that the status of Tank 6D-02 and the Chlor-Alkali Container Storage Area are “Closed”.

**Deficiency ID Number NT5**

The Part A Attachment D photograph of the halogen acid furnaces CCIN-1 and CCIN-2 was revised to correct the unit names and correct the associated NOR numbers.

**Deficiency ID Number NT6**

The “Supporting Regulatory Citation” column of Table I.1 in Attachment I of the Part B Permit Renewal Application has been revised to add the 30 TAC 305.62(c)(2) regulatory citation.

**Deficiency ID Number T2**

The Part A and Part B permit applications have been revised to replace “Incinerator” with “Halogen Acid Furnace” where appropriate. In addition, any regulatory citations applicable to incinerators have been replaced with citations applicable to halogen acid furnaces.

**Deficiency ID Number T3**

Section D.8 of Table I: General Information in Attachment I of the Part B Permit Renewal Application has been revised to indicate that the River Segment is “Corpus Christi Bay (Recreational Beaches)” and the River Basin is “Bays and Estuaries – Segment 2481”.

**Deficiency ID Number NT7**

There is no Local Health Authority for the facility, only the County Health Authority. As such, Table I Item G in Attachment I of the Part B Permit Renewal Application has been updated by placing N/A (Not Applicable) for the Local Health Authority.

**Deficiency ID Number NT8**

Table II (page 1 of 7) in Attachment II of the Part B Permit Renewal Application was revised to indicate that the location in the application of the regional aquifer information is Attachment V.A Section 2.4.

**Deficiency ID Number NT9**

Table II (pages 3 through 7) in Attachment II of the Part B Permit Renewal Application was revised by adding “Not applicable – The facility is an existing facility, and there are no RCRA Land Treatment Units, waste piles, landfills, and surface impoundments.” into the header of each page.

**Deficiency ID Number T4**

The National Oceanic and Atmospheric Administration (NOAA) precipitation data for the closest location to the facility (Portland, Texas) was obtained and is included in Appendix D of Attachment V.A of the Part B Permit Renewal Application.

**Deficiency ID Number NT10**

Table III.B-4 of the Training Plan in Attachment III.B of the Part B Permit Renewal Application was revised to remove the superscript “1” from the header of the Required Periodic Training column. The superscript “1” was a typographic error.

**Deficiency ID Number NT11**

The header of Table III.E.2 in Attachment III.E of the Part B Permit Renewal Application was updated by adding the permit number and permittee name.

**Deficiency ID Number C2**

Section 2.0 of the Waste Analysis Plan in Attachment IV.D of the Part B Permit Renewal Application was revised to include a brief description of the change in classifications of CCIN-1 and CCIN-2 from Incinerators to Halogen Acid Furnaces. This reclassification occurred during the renewal of the hazardous waste permit in 2014 and 2015.

**Deficiency ID Number T5**

The waste analysis plan was designed to provide sampling and analysis of all of the hazardous waste streams listed in Table 3-1, including the five (5) streams that are typically combusted onsite in CCIN-1 and CCIN-2 but could also be shipped offsite to an authorized TSDF. The Waste Analysis Plan in Attachment IV.D of the Part B Permit Renewal Application has been revised to clarify this distinction. In addition, the Waste Analysis Plan has been revised to describe the sampling and analytical methods for liquids placed into Tanks C-720A and C-720B.

**Deficiency ID Number T6**

Table 4-1 (Analytical Methods) of the Waste Analysis Plan contained in Attachment IV.D of the Part B Permit Renewal Application was revised to include mercury analyses using SW-846 Method 7470/7471 (CVAAS), EPA Method 245.1 (CVAAS), or EPA Method 200.7 (ICP-AES).

**Deficiency ID Number NT12**

Table IV.B in Attachment IV of the Part B Permit Renewal Application was revised to indicate those waste streams that may also be received from off-site sources.

**Deficiency ID Number NT13**

Table IV.C in Attachment IV of the Part B Permit Renewal Application has been revised to add footnotes 4 and 5 to the table.

### **Deficiency ID Number T7**

The reports in Attachment V of the Part B Permit Renewal Application have been reviewed by a Texas Professional Engineer (PE). The reports and the secondary containment volumes have been sealed, signed, and dated by the Texas PE and includes the engineering firm name and registration number. In addition, Tables V.B and V.C were revised to address the changes in the calculated secondary containment volumes.

### **Deficiency ID Number T8**

The closure plans included in each of the engineering reports were removed from the engineering reports and placed as separate documents in Attachment VII, Closure and Post-Closure Plan. The CCIN-1 and CCIN-2 closure plans are now located in Attachments VII.A.4 and VII.A.5, respectively.

Table 3 in Attachment VII.A.4 (CCIN-1 Closure Plan) and Table 3 in Attachment VII.A.5 (CCIN-2 Closure Plan) of the Part B Permit Renewal Application contain a closure cost estimate line item description of “Flush and dispose of rinsate”. Table 3 in both attachments have been updated to change this wording to “Rinsing and disposal of rinsate” as requested. Since no changes are being made to the closure cost estimates based on this deficiency, no closure cost estimate values are required to be updated.

### **Deficiency ID Number NT14**

The typos in the “Possible Methods of Disposal” column in Table VII.A of Attachment VII of the Part B Permit Renewal Application have been corrected.

### **Deficiency ID Number T9**

The closure plans included in each of the engineering reports were removed from the engineering reports and placed as separate documents in Attachment VII, Closure and Post-Closure Plan. The VCM CSA closure plan is now located in Attachment VII.A.1.

A container storage area (CSA) is essentially a secondary containment structure for the containers stored within the structure. Therefore, when it states “Decontamination of slab” in Table VII.B of Attachment VII of the Part B Permit Renewal Application it is referring to the concrete slab that functions as the secondary containment for the CSA. As such, the closure cost estimate for the VCM CSA does include the costs for decontaminating the secondary containment. Since no changes are being made to the closure cost estimates based on this deficiency, no closure cost estimate values are required to be updated.



**Deficiency ID Number NT15**

Table VII.E.1 in Attachment VII of the Part B Permit Renewal Application has been revised to indicate that the closure cost summary is in 2024 dollars instead of 2025 dollars.

**Deficiency ID Number T10**

The Financial Disclosure Letter included in Attachment VIII of the Part B Permit Renewal Application has been revised as indicated in the deficiency.

**Deficiency ID Number T11**

The Preliminary Review Facility Checklist and Preliminary Review Unit Checklist are included as Appendix C and Appendix D in Attachment IX of the Part B Permit Renewal Application.

Appendix A of Attachment IX of the Part B Permit Renewal Application was updated by removing the NOR dated April 9, 2025 and replacing it with the NOR dated August 14, 2025.

A copy of the January 22, 2003 letter from TCEQ indicating that all RCRA Facility Investigation obligations had been met at the facility is included as Appendix B in Attachment IX of the Part B Permit Renewal Application.

**Deficiency ID Number T12**

Table X.B was added to Attachment X of the Part B Permit Renewal Application.

\* \* \* \* \*

Based upon the above responses to the noted deficiencies, pages of the application were required to be revised and updated. The attached document contains the redline pages and any new or revised drawings, attachments, and tables. The second attached document contains the entire application with all of the revisions included.

## **Part A Permit Application**

### **OxyChem Ingleside Plant**

## **Part A Application Form**

**Texas Commission on Environmental Quality**  
**Permit Application for a Hazardous Waste Storage/Processing/Disposal Facility**  
**Part A - Facility Background Information**

I. General Information

A. Facility Name: OxyChem Ingleside Plant~~Occidental Chemical Corporation~~

-----  
(Individual, Corporation, or Other Legal Entity Name)

TCEQ Solid Waste Registration No: 38280 EPA I.D. No.: TXD 982 286 932

Street Address (If Available): 4133 Highway 361-----

City: Gregory-----, State: Texas----- Zip Code: 78359-----

County: San Patricio-----

Telephone Number: (361) 776-6000----- Charter Number: 1889306-----

If the application is submitted on behalf of a corporation, please identify the Charter Number as recorded with the Office of the Secretary of State for Texas.

B. Facility Contact

1. List those persons or firms who will act as primary contact for the applicant during the processing of the permit application. Also indicate the capacity in which each person may represent the applicant (engineering, legal, etc.). The person listed first will be the primary recipient of correspondence regarding this application. Include the complete mailing addresses and phone numbers.

**Aron Baggett, Environmental Manager**  
**Occidental Chemical Corporation**  
**P.O. Drawer CC**  
**Ingleside, Texas 78362**  
**(361) 776-6395**

2. If the application is submitted by a corporation or by a person residing out of state, the applicant must register an Agent in Service or Agent of Service with the Texas Secretary of State's office and provide a complete mailing address for the agent. The agent must be a Texas resident.

**Not Applicable**

C. Operator<sup>1</sup>: Identify the entity who will conduct facility operations.

Operator Name: Occidental Chemical Corporation-----

Address: P.O. Drawer CC-----

City: Ingleside-----, State: Texas----- Zip Code: 78362-----

Telephone Number: (361) 776-6000----- Charter Number: 1889306-----

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<sup>1</sup> The operator has the duty to submit an application if the facility is owned by one person and operated by another [30 TAC 305.43(b)]. The permit will specify the operator and the owner who is listed on this application [Section 361.087 Texas Health and Safety Code].



D. Owner

1. Indicate the ownership status of the facility:

a. Private \_\_\_\_X\_\_\_\_

- (1) \_\_\_\_X\_\_\_\_ Corporation
- (2) \_\_\_\_\_ Partnership
- (3) \_\_\_\_\_ Proprietorship
- (4) \_\_\_\_\_ Non-profit organization

b. Public \_\_\_\_\_

- (1) \_\_\_\_\_ Federal
- (2) \_\_\_\_\_ Military
- (3) \_\_\_\_\_ State
- (4) \_\_\_\_\_ Regional
- (5) \_\_\_\_\_ County
- (6) \_\_\_\_\_ Municipal
- (7) \_\_\_\_\_ Other (specify)

2. Does the operator own the facility units and facility property?

☒ Yes ☐ No

If you checked "no",

- a. Submit as "Attachment A" a copy of the lease for use of or the option to buy said facility units and/or facility property, as appropriate; and
- b. Identify the facility units' owner(s) and/or facility property owner(s). Please note that the owner(s) is/are required to sign the application on page 5.

Owner Name: Same As Operator \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_, State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Owner Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_, State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

E. Type of Application Submittal:

Initial \_\_\_\_X\_\_\_\_ or Revision \_\_\_\_X\_\_\_\_

F. Registration and Permit Information

Indicate (by listing the permit number(s) in the right-hand column below) all existing or pending State and/or Federal permits or construction approvals which pertain to pollution control or industrial solid waste management activities conducted by your plant or at your location. Complete each blank by entering the *permit number*, or the *date of application*, or "none".

| Relevant Program and/or Law                                                                                         | Permit No.         | Agency*         |
|---------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|
| 1. Texas Solid Waste Disposal Act                                                                                   | <u>See Table 1</u> | <u>--TCEQ--</u> |
| 2. Wastewater disposal under the Texas Water Code                                                                   | <u>See Table 1</u> | <u>--TCEQ--</u> |
| 3. Underground injection under the Texas Water Code                                                                 | <u>N/A</u>         | <u>N/A</u>      |
| 4. Texas Clean Air Act                                                                                              | <u>See Table 1</u> | <u>--TCEQ--</u> |
| 5. Texas Uranium Surface Mining & Reclamation Act                                                                   | <u>N/A</u>         | <u>N/A</u>      |
| 6. Texas Surface Coal Mining & Reclamation Act                                                                      | <u>N/A</u>         | <u>N/A</u>      |
| 7. Hazardous Waste Management program under the Resource Conservation and Recovery Act                              | <u>See Table 1</u> | <u>TCEQ/EPA</u> |
| 8. UIC program under the Safe Drinking Water Act                                                                    | <u>N/A</u>         | <u>N/A</u>      |
| 9. TPDES program under the Clean Water Act                                                                          | <u>See Table 1</u> | <u>TCEQ/EPA</u> |
| 10. PSD program under the Clean Air Act                                                                             | <u>See Table 1</u> | <u>TCEQ/EPA</u> |
| 11. Nonattainment program under the Clean Air Act                                                                   | <u>N/A</u>         | <u>N/A</u>      |
| 12. National Emission Standards for Hazardous Pollutants (NESHAP) Pre-construction approval under the Clean Air Act | <u>N/A</u>         | <u>N/A</u>      |
| 13. Ocean dumping permits under the Marine Protection Research and Sanctuaries Act                                  | <u>N/A</u>         | <u>N/A</u>      |
| 14. Dredge or fill permits under section 404 of the Clean Water Act                                                 | <u>--N/A--</u>     | <u>--N/A--</u>  |
| 15. Other relevant environmental permits                                                                            | <u>N/A</u>         | <u>N/A</u>      |

\*Use the following acronyms for each agency as shown below:

|       |                                             |
|-------|---------------------------------------------|
| TCEQ  | = Texas Commission on Environmental Quality |
| TRC   | = Texas Railroad Commission                 |
| TDH   | = Texas Department of Health                |
| TDA   | = Texas Department of Agriculture           |
| EPA   | = U.S. Environmental Protection Agency      |
| CORPS | = U.S. Army Corps of Engineers              |

G. Give a brief description of the nature of your business.

**Chemical manufacturing complex.**

H. TCEQ Core Data Form

The TCEQ requires that a Core Data Form (Form 10400) be submitted on all incoming applications. For more information regarding the Core Data Form, call (512) 239-1575 or go to the TCEQ website at [http://www.tceq.texas.gov/permitting/central\\_registry/guidance.html](http://www.tceq.texas.gov/permitting/central_registry/guidance.html).

**A current Core Data Form is attached.**



### Signature Page

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Operator Signature: T. Behne Date: 10-27-2025

Name and Official Title (type or print): Todd Behne - Plant Manager

Operator Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name and Official Title (type or print): \_\_\_\_\_

Operator Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name and Official Title (type or print): \_\_\_\_\_

Owner Signature: Same as Operator Date: \_\_\_\_\_

Name and Official Title (type or print): \_\_\_\_\_

To be completed by the operator if the application is signed by an authorized representative for the operator

I, Not Applicable hereby designate \_\_\_\_\_  
(operator) (authorized representative)

as my representative and hereby authorize said representative to sign any application, submit additional information as may be requested by the Commission; and/or appear for me at any hearing or before the Texas Commission on Environmental Quality in conjunction with this request for a Texas Water Code or Texas Solid Waste Disposal Act permit. I further understand that I am responsible for the contents of this application, for oral statements given by my authorized representative support of the application, and for compliance with the terms and conditions of any permit which might be issued based upon this application.

Printed or Typed Name of Operator or Principal Executive Officer

Signature

(Note: Application Must Bear Signature & Seal of Notary Public)

Subscribed and sworn to before me by the said Todd Behne on this  
27th day of October, 2025

My commission expires of the 9th day of April, 2029

Patty Kraft  
Notary Public in and for San Patricio County, Texas



## II. Facility Background Information

### A. Location of Facility for which the application is submitted

1. Give a description of the location of the facility site with respect to known or easily identifiable landmarks.

**The facility is located between Corpus Christi Bay and State Highway 361 at a location approximately three miles southeast of Gregory, Texas.**

2. Detail the access routes from the nearest U.S. or State Highway to the facility.

**The facility is accessed from State Highway 361 by turning South onto the entrance road to the plant, which is marked by a large Occidental Chemical Corporation sign. One then proceeds approximately 7/8 mile down the road for plant access.**

3. Enter the geographical coordinates of the facility:

Latitude: \_\_\_27\_\_\_ deg \_\_\_52\_\_\_ min \_\_\_51\_\_\_ sec

Longitude: \_\_\_97\_\_\_ deg \_\_\_14\_\_\_ min \_\_\_39\_\_\_ sec

4. Is the facility located on Indian lands?

☐ Yes ☒ No

### B. Legal Description of Facility

Submit as "Attachment B" a legal description(s) of the tract or tracts of land upon which the waste management operations referred to in this permit application occur or will occur. Although a legal description is required, a metes and bounds description is not necessary for urban sites with appropriate "lot" description(s). A survey plat or facility plan drawing which shows the specific points referenced in the survey should also be included in Attachment B.

**A legal description of the facility is included in Attachment B.**

### C. SIC Codes

List, in descending order of significance, the four digit standard industrial classification (SIC) codes which best describe your facility in terms of the principal products or services you produce or provide. Also, specify each classification in words. These classifications may differ from the SIC codes describing the operation generating the hazardous wastes.

| 4-digit SIC Code | Description                                                |
|------------------|------------------------------------------------------------|
| 2869             | Ethylene dichloride (EDC) and vinyl chloride monomer (VCM) |
| 2812             | Caustic and Chlorine                                       |
| 4911             | Electricity                                                |
| 2813             | Hydrogen                                                   |

SIC code numbers are descriptions which may be found in the Standard Industrial Classification Manual prepared by the Executive Officer of the President, Office of Management and Budget, which is available from the Government Printing Office,

### III. Wastes and Waste Management

#### A. Waste Generation and Management Activities

Is any hazardous waste [see Title 40, Code of Federal Regulations (CFR), Part 261] presently or proposed to be generated or received at your facility?

☒ Yes ☐ No

**If no**, skip to question Number 2 below.

**If yes**, answer the following question.

1. Are you presently registered with TCEQ as a solid waste generator?

☒ Yes ☐ No ☐ Pending

**If no**, contact the Industrial and Hazardous Waste Division of TCEQ in Austin, Texas to obtain registration information. Also, continue with the application form (go to Number 2 below).

**If yes**, go to Section I of your TCEQ Notice of Registration, determine which of your wastes are hazardous, and list these wastes (and mixtures) in Table III-1 (see Number 2 below).

2. Complete Table III-1, Hazardous Wastes and Management Activities, below, listing all hazardous wastes, all mixtures containing any hazardous wastes, and hazardous debris which were, are presently, or are proposed to be handled at your facility in interim status or permitted units. See 40 CFR 261 and 268.2, attaching additional copies as necessary.

**Table III-1 has been completed and is attached.**

*Guidelines for the Classification & Coding of Industrial Wastes and Hazardous Wastes*, TCEQ publication RG-22, contains guidance on how to properly classify and code industrial waste and hazardous waste in accordance with 30 TAC 335.501-335.515 (Subchapter R).

If you are not registered with TCEQ, enter "NA" for TCEQ Waste Code Number.

For the EPA Hazardous Waste Numbers, see 40 CFR 261.20-33. For annual quantity, provide the amount in units of pounds (as generated and/or received) for each waste and/or waste mixture.

#### B. Waste Management Units Summary

1. For each waste and waste mixture listed in Table III-1 that is stored, processed, and/or disposed on-site (except where such storage and/or processing is excluded from permit requirements in accordance with Texas Administrative Code (TAC) Section 335), complete Table III-2, Hazardous Waste Management Unit Checklist, and enter the name of each hazardous waste management unit (Note: Please make copies of Table III-2 if necessary).

Give the design capacity of each hazardous waste management unit in any of the units of measure shown. In the case of inactive or closed units for which design details are unavailable, an estimate of the design capacity is sufficient.

Please provide a description for each waste management unit described in your own words on the line provided for "Waste Management Unit."

**Table III-2 has been completed and attached and contains the above information.**

2. Has the applicant at any time conducted the on-site disposal of industrial solid waste now identified or listed as hazardous waste?

☐ Yes ☒ No

**If yes**, complete Table III-2 indicating the hazardous waste management units which were once utilized at your plant site but are no longer in service (i.e., inactive or closed facility units).

**If no**, and if no hazardous waste is presently or proposed to be stored [for longer than 90 days (see 30 TAC Section 335.53)], processed, or disposed of at your facility, then you need not file this permit application. Otherwise proceed with the application form.

3. Provide an estimate of the total weight (lbs) of hazardous waste material that has been disposed of and/or stored within your site boundaries and not removed to another site.

**Not Applicable. No onsite disposal has occurred, and indefinite storage onsite does not occur.**

#### C. Location of Waste Management Units

1. Submit as "Attachment C" a drawn-to-scale topographic map (or other map if a topographic map is unavailable) extending one mile beyond the facility boundaries, depicting the following:

**A topographic map containing the below elements is included as Attachment C.**

- a. The approximate boundaries of the facility (described in Section II.B) and within these boundaries, the location and boundaries of the areas occupied by each active, inactive, and proposed hazardous waste management unit (see Table III-2). Each depicted area should be labeled to identify the unit(s), unit status (i.e., active, inactive, or proposed), and areal size in acres.

**Facility boundaries and locations of hazardous waste management units are indicated in Attachment C. NOTE: There are no proposed hazardous waste management units in this application.**

- b. The overall facility and all surface intake and discharge structures;

**There are no surface intake structures at the facility. The**

**location of discharge structure Outfall 001 is indicated in Attachment C.**

- c. All on-site injection wells where liquids are injected underground;

**There are no injection wells at the facility.**

- d. All known monitor wells and boreholes within the property boundaries of the facility; and

**The few onsite monitoring wells are indicated on Attachment C. There are no boreholes at the facility.**

- e. All wells, springs, other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant within the map area and the purpose for which each water well is used (e.g., domestic, livestock, agricultural, industrial, etc.).

**There are no wells, springs, surface waters (aside from Corpus Christi Bay), or drinking water wells at the facility.**

2. Submit as "Attachment D" photographs which clearly delineate all hazardous waste management storage, processing, and disposal units, as well as sites of future storage, processing and disposal units.

**Photographs of the hazardous waste management units are included in Attachment D.**

**D. Flow Diagram/Description**

Show as "Attachment E" process flow diagrams and step-by-step word descriptions of the process flow, depicting the handling, collection, storage, processing, and/or disposal of each of the hazardous wastes previously listed in this application.

**A process flow diagram is included in Attachment E that contains the following information.**

The flow diagrams or descriptions should include the following information:

1. Originating point of each waste and waste classification code;
2. Means of conveyance utilized in every step of the process flow;
3. Name and function of each facility component through which the waste passes;
4. The ultimate disposition of all wastes (if off-site, specify "off-site") and waste residues.

#### IV. Index Of Attachments

List and index below all attachments to this application and indicate if included or not included:

| <b>Item</b> | <b>Attachments</b>                          | <b>Attachment</b> | <b>Included</b> | <b>Not Included</b> |
|-------------|---------------------------------------------|-------------------|-----------------|---------------------|
| I.D.2.a     | Lease/Option to buy                         | A                 |                 | X                   |
| II.B        | Site legal description                      | B                 | X               |                     |
| III.C.1     | Facility boundaries and adjacent waters map | C                 | X               |                     |
| III.C.2     | Photographs                                 | D                 | X               |                     |
| III.D       | Process flow diagram/description            | E                 | X               |                     |

Table III-1 – Hazardous Wastes and Management Activities

| Verbal Description of Waste            | TCEQ Waste for Code and Classification Code  | EPA Hazardous Waste Number                                   | Storage <sup>1</sup> of Wastes Received from Off-Site | Processing <sup>2</sup> of Wastes Received from Off-Site | Disposal of Wastes Received from Off-Site | Storage <sup>1</sup> of Wastes Generated On-Site | Processing <sup>2</sup> of Wastes Generated On-Site | Disposal of Wastes Generated On-Site | Annual Quantity Generated and/or Received |
|----------------------------------------|----------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------|-------------------------------------------|--------------------------------------------------|-----------------------------------------------------|--------------------------------------|-------------------------------------------|
| Oil and/or Solvent Contaminated Solids | 0106489H<br>0108407H<br>0241301H<br>0301301H | D028, D040<br>D043, F001<br>F003, K019<br>K020, U043<br>U077 |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 2.20                                      |
| Spent Paint Thinner                    | 0117211H                                     | D001, D035<br>F003, F005                                     |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 1.23                                      |
| Waste Paint Solids                     | 0133409H                                     | F003, F005                                                   |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 2.87                                      |
| Waste Oil                              | 0136206H                                     | D001, D028<br>D040, F001<br>F002                             |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 4.07                                      |
| Waste Resin, Sealant, or Varnish       | 0138219H<br>0140209H<br>0196409H             | D001, D003<br>F003                                           |                                                       |                                                          |                                           | X                                                |                                                     |                                      | NRG                                       |
| Fuel Oil Contaminated Water            | 0177205H                                     | D001, D018                                                   |                                                       |                                                          |                                           | X                                                |                                                     |                                      | NRG                                       |
| Spent Carbon Canisters and Can Residue | 0190404H<br>0192204H<br>0196409H             | D001, D035<br>D040, F003                                     |                                                       |                                                          |                                           | X                                                |                                                     |                                      | NRG                                       |
| Biosolids                              | 0228491H                                     | F001, F003<br>F005, F025<br>K019, K020                       |                                                       |                                                          |                                           | X                                                |                                                     |                                      | NRG                                       |

<sup>1</sup> "Storage" means the holding of solid waste for a temporary period, at the end of which the waste is processed, disposed of, or stored elsewhere.

<sup>2</sup> "Processing" means the extraction of materials, transfer, volume reduction, conversion to energy, or other separation and preparation of solid waste for reuse or disposal, including the treatment or neutralization of hazardous waste, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy or material from the waste or so as to render such waste non-hazardous or less hazardous; safer for transport, store or dispose of; or amenable for recovery, amenable for storage, or reduced in volume. The "transfer" of solid waste for reuse or disposal as used above, does not include the actions of a transporter in conveying or transporting solid waste by truck, ship, pipeline, or other means. Unless the Executive Director determines that regulation of such activity is necessary to protect human health or the environment, the definition of "processing" does not include activities relating to those materials exempted by the Resource Conservation and Recovery Act, 42 U.S.C. 6901 et seq., as amended.

| Verbal Description of Waste     | TCEQ Waste for Code and Classification Code | EPA Hazardous Waste Number                                                                                   | Storage <sup>1</sup> of Wastes Received from Off-Site | Processing <sup>2</sup> of Wastes Received from Off-Site | Disposal of Wastes Received from Off-Site | Storage <sup>1</sup> of Wastes Generated On-Site | Processing <sup>2</sup> of Wastes Generated On-Site | Disposal of Wastes Generated On-Site | Annual Quantity Generated and/or Received |
|---------------------------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------|-------------------------------------------|--------------------------------------------------|-----------------------------------------------------|--------------------------------------|-------------------------------------------|
| Reboiler Scale                  | 0229407H                                    | D007, D019<br>D022, D028<br>D032, D040                                                                       |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 1.74                                      |
| EDC Contaminated Material       | 0238319H                                    | D028, F024                                                                                                   |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 41.08                                     |
| Incinerator Ash/Brick           | 0242303H<br>0243319H                        | F001, F003<br>F005, F025<br>K019, K020                                                                       |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 1.90                                      |
| VCN Furnace Coke                | 0244407H                                    | D001, D006<br>D007, D028<br><del>KD</del> 043                                                                |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 22.87                                     |
| Spent Catalyst                  | 0246393H<br>0298393H                        | D028, F001<br>F003, F005<br>F025, K019<br>K020                                                               |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 9.33                                      |
| VCN Trench Material             | 0247319H                                    | D028, D043<br>K019, K020<br>U077                                                                             |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 1.74                                      |
| VCN Heavy Ends                  | 0248219H<br>219H<br>202H                    | D001, D007<br>D019, D021<br>D022, D027<br>D028, D029<br>D032, D033<br>D034, D036<br>D039, D040<br>K019, K020 | X                                                     | X                                                        |                                           | X                                                | X                                                   |                                      | 18,954                                    |
| VCN Contaminated Filters/Carbon | 0249310H<br>0250404H                        | F025, D043                                                                                                   |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 2.96                                      |
| VCN Light Ends                  | 0251219H<br>219H                            | D001, D018<br>D019, D022<br>D028, D029<br>D040, F025                                                         | X                                                     | X                                                        |                                           | X                                                | X                                                   |                                      | 0.02                                      |
| Limestone Sludge                | 0253306H                                    | F001, F003<br>F005, F025<br>K019, K020                                                                       |                                                       |                                                          |                                           | X                                                |                                                     |                                      | NRG                                       |
| Rockbox                         | 0255319H                                    | F001, F003                                                                                                   |                                                       |                                                          |                                           | X                                                |                                                     |                                      | NRG                                       |



| Verbal Description of Waste       | TCEQ Waste for Code and Classification Code | EPA Hazardous Waste Number                                                 | Storage <sup>1</sup> of Wastes Received from Off-Site | Processing <sup>2</sup> of Wastes Received from Off-Site | Disposal of Wastes Received from Off-Site | Storage <sup>1</sup> of Wastes Generated On-Site | Processing <sup>2</sup> of Wastes Generated On-Site | Disposal of Wastes Generated On-Site | Annual Quantity Generated and/or Received |
|-----------------------------------|---------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------|-------------------------------------------|--------------------------------------------------|-----------------------------------------------------|--------------------------------------|-------------------------------------------|
| Residue                           |                                             | F005, F025<br>K019, K020                                                   |                                                       |                                                          |                                           |                                                  |                                                     |                                      |                                           |
| Mother Liquor                     | 0258219H                                    | D001, K019<br>K020                                                         |                                                       |                                                          |                                           | X                                                |                                                     |                                      | NRG                                       |
| Incinerator Flue Gas Scale        | 0289303H                                    | F001, F003<br>F005, F025<br>K019, K020                                     |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 0.03                                      |
| VCM Incinerator Acid              | 0293105H                                    | D002, F001<br>F003, F005<br>F025, K019<br>K020                             |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 16,234                                    |
| EDC Heavy Ends                    | 0339219H<br>219H<br>204H                    | D001, D002<br>D021, D022<br>D027, D028<br>D034, D036<br>D039, D040<br>K019 | X                                                     | X                                                        |                                           | X                                                | X                                                   |                                      | NRG                                       |
| Chlorine Butter, Solids, Elements | 0406609H<br>0405403H<br>0411319H            | D019, D022<br>D032, D034<br>D037, D039<br>D040, D042                       |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 0.11                                      |
| Natural Gas Condensate            | 0504219H                                    | D009, D018                                                                 |                                                       |                                                          |                                           | X                                                |                                                     |                                      | NRG                                       |
| Wastewater Solids/Sand            | 0276407H<br>0294319H                        | F001, F003<br>F005, F025<br>K019, K020                                     |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 52.34                                     |
| Other Inorganic Waste             | Various                                     | Various                                                                    |                                                       |                                                          |                                           | X                                                |                                                     |                                      | NRG                                       |
| Other Organic Waste               | Various                                     | Various                                                                    |                                                       |                                                          |                                           | X                                                |                                                     |                                      | NRG                                       |

**NRG - not routinely generated.**

**Note: annual generation rates are in tons and are based on the last three years of generation rates as reported via the annual waste summary.**



## **Part A Attachment B**

### **Site Legal Description**

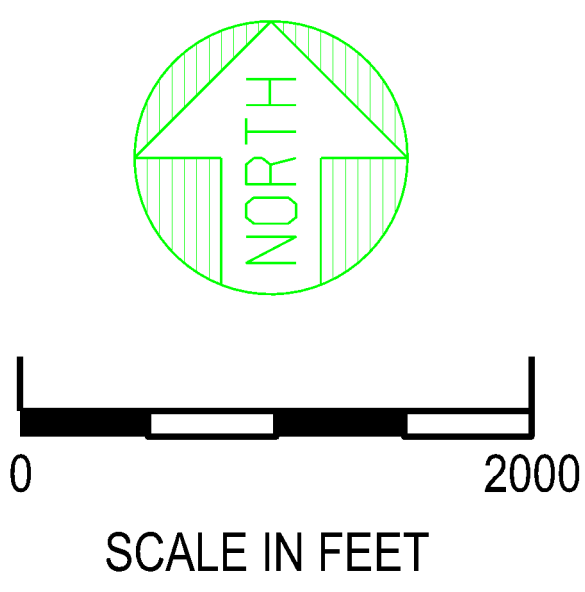
## **Part A Attachment C**

### **Facility Boundaries Map**





MAP SOURCE: USGS 7.5 MIN. QUAD SHEETS ARANSAS PASS, TX., 2022; GREGORY, TX, 2022, PORT OF INGLESIDE, TX, 2022, PORTLAND, TX, 2022



- FACILITY BOUNDARY
- ONE MILE RADIUS
- OUTFALL LOCATION
- MONITORING WELL LOCATION AND IDENTIFICATION NUMBER

# OXYCHEM

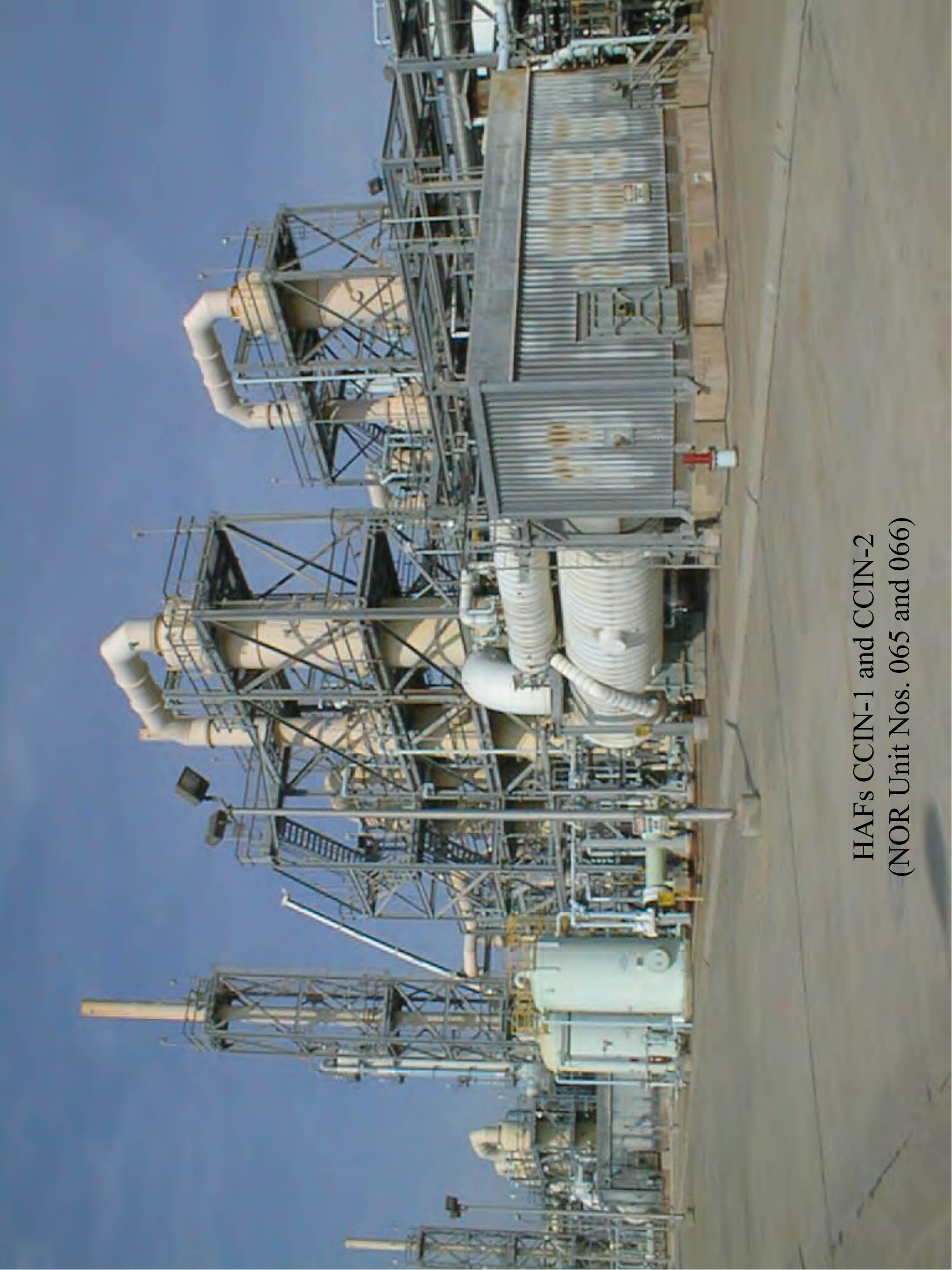
DATE: 06/17/2025 FILE: ATT-C-USGSMAP.DGN

ATTACHMENT C  
USGS MAP



## **Part A Attachment D**

### **Photographs**



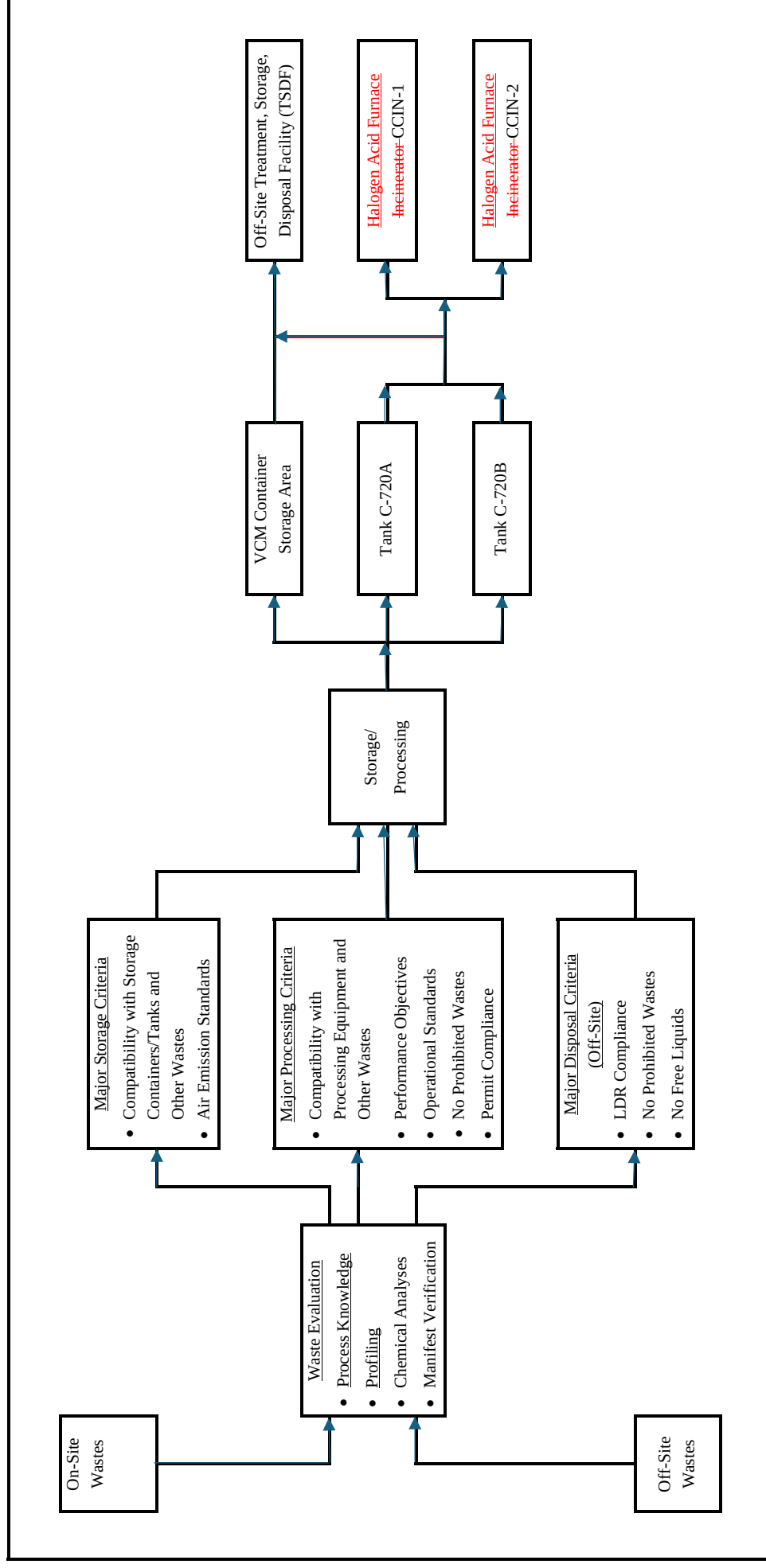
HAFs CCIN-1 and CCIN-2  
(NOR Unit Nos. 065 and 066)

## **Part A Attachment E**

### **Process Flow Diagram**



## Attachment E      Process Flow Diagram



## **Part B Permit Application**

### **OxyChem Ingleside Plant**



## **Attachment I.**

### **General Information**

**Table I.1 – Description of Proposed Application Changes**

| Permit/Compliance Plan Application Appendix/Section | Brief Description of Proposed Changes                                                                      | Modification or Amendment Type | Supporting Regulatory Citation                                    |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------------------|
| Throughout Application                              | Formatting and Grammar                                                                                     | Minor                          | <u>30 TAC 305.62(c)(2) and 40 CFR 270.41</u><br>App. I Item A.1   |
| Throughout Application                              | Correct Typographic Errors                                                                                 | Minor                          | <u>30 TAC 305.62(c)(2) and 40 CFR 270.41</u><br>App. I Item A.2   |
| III.B – Training Plan                               | Removed sections for closed and inactive units                                                             | Minor                          | <u>30 TAC 305.62(c)(2) and 40 CFR 270.41</u><br>App. I Item A.1   |
| III.E – Contingency Plan                            | Updated Emergency Coordinator Information                                                                  | Minor                          | <u>30 TAC 305.62(c)(2) and 40 CFR 270.41</u><br>App. I Item B.6.d |
| V.B.1 – VCM CSA                                     | Updated Closure Costs to 2024 Dollars                                                                      | Minor                          | <u>30 TAC 305.62(c)(2) and 40 CFR 270.41</u><br>App. I Item A.1   |
| V.C.1 – C-720A                                      | Revised Closure Schedule                                                                                   | Minor                          | <u>30 TAC 305.62(c)(2) and 40 CFR 270.41</u><br>App. I Item D.1.b |
| V.C.1 – C-720A                                      | Updated Closure Costs to 2024 Dollars                                                                      | Minor                          | <u>30 TAC 305.62(c)(2) and 40 CFR 270.41</u><br>App. I Item A.1   |
| V.C.2 – C-720B                                      | Revised Closure Schedule                                                                                   | Minor                          | <u>30 TAC 305.62(c)(2) and 40 CFR 270.41</u><br>App. I Item D.1.b |
| V.C.2 – C-720B                                      | Updated Closure Costs to 2024 Dollars                                                                      | Minor                          | <u>30 TAC 305.62(c)(2) and 40 CFR 270.41</u><br>App. I Item A.1   |
| V.I.1 – CCIN-1                                      | Revise regulatory citations and text from Incinerator to <u>Halogen Acid</u> <del>Industrial</del> Furnace | Minor                          | <u>30 TAC 305.62(c)(2) and 40 CFR 270.41</u><br>App. I Item A.1   |



**Table I.1 – Description of Proposed Application Changes**

| Permit/Compliance Plan Application Appendix/Section | Brief Description of Proposed Changes                                                                      | Modification or Amendment Type | Supporting Regulatory Citation                                    |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------------------|
| V.I.1 – CCIN-1                                      | Revised Closure Schedule                                                                                   | Minor                          | <u>30 TAC 305.62(c)(2) and 40 CFR 270.41</u><br>App. I Item D.1.b |
| V.I.1 – CCIN-1                                      | Updated Closure Costs to 2024 Dollars                                                                      | Minor                          | <u>30 TAC 305.62(c)(2) and 40 CFR 270.41</u><br>App. I Item A.1   |
| V.I.2 – CCIN-2                                      | Revise regulatory citations and text from Incinerator to <u>Halogen Acid</u> <del>Industrial</del> Furnace | Minor                          | <u>30 TAC 305.62(c)(2) and 40 CFR 270.41</u><br>App. I Item A.1   |
| V.I.2 – CCIN-2                                      | Revised Closure Schedule                                                                                   | Minor                          | <u>30 TAC 305.62(c)(2) and 40 CFR 270.41</u><br>App. I Item D.1.b |
| V.I.2 – CCIN-2                                      | Updated Closure Costs to 2024 Dollars                                                                      | Minor                          | <u>30 TAC 305.62(c)(2) and 40 CFR 270.41</u><br>App. I Item A.1   |
| VII. – Closure and Post-Closure                     | Updated Closure Costs to 2024 Dollars                                                                      | Minor                          | <u>30 TAC 305.62(c)(2) and 40 CFR 270.41</u><br>App. I Item A.1   |

## **Attachment I.A**

### **Table 1 – General Information**



**Table I: General Information****A. Applicant: Facility Operator**

|                                                          |                                 |
|----------------------------------------------------------|---------------------------------|
| Name <sup>1</sup>                                        | Occidental Chemical Corporation |
| Address <sup>2</sup>                                     | P.O. Drawer CC                  |
| City, State <sup>2</sup>                                 | Ingleside, Texas                |
| Zip Code <sup>2</sup>                                    | 78362                           |
| Telephone Number                                         | (361) 776-6000                  |
| Alternate Telephone Number                               |                                 |
| TCEQ Solid Waste Registration No.                        | 38280                           |
| EPA I.D. No.                                             | TXD 982 286 932                 |
| Permit No.                                               | 50322                           |
| County                                                   | San Patricio                    |
| Regulated Entity Name                                    | OxyChem Ingleside Plant         |
| Regulated Entity Reference Number (RN)                   | RN100211176                     |
| Customer Name <sup>2</sup>                               | Occidental Chemical Corporation |
| Customer Reference Number:                               | CN600125256                     |
| Charter Number <sup>3</sup>                              | 1889306                         |
| Previous or Former Names of the Facility (if applicable) | N/A                             |

**B. Facility Owner: Identify the Facility Owner if different than the Facility Operator<sup>4</sup>**
☒ Same as Facility Operator?

|                            |                                 |
|----------------------------|---------------------------------|
| Name                       | Occidental Chemical Corporation |
| Address                    | P.O. Drawer CC                  |
| City, State                | Ingleside, Texas                |
| Zip Code                   | 78362                           |
| Telephone Number           | (361) 776-6000                  |
| Alternate Telephone Number |                                 |

**C. Facility Contact****1. Persons or firms who will act as primary contact:**

|                            |                                     |
|----------------------------|-------------------------------------|
| Name, Title:               | Aron Baggett, Environmental Manager |
| Address                    | P.O. Box CC                         |
| City, State:               | Ingleside, Texas                    |
| Zip Code                   | 78362                               |
| Telephone Number           | (361) 776-6395                      |
| Alternate Telephone Number |                                     |
| E-mail                     |                                     |

**Persons or firms who will act as primary contact (if more than one):**

|                            |  |
|----------------------------|--|
| Name, Title:               |  |
| Address                    |  |
| City, State:               |  |
| Zip Code                   |  |
| Telephone Number           |  |
| Alternate Telephone Number |  |
| E-mail                     |  |

**2. Agent in Service or Agent of Service (if you are an out-of-state company)<sup>5</sup>:**

|              |  |
|--------------|--|
| Name, Title: |  |
| Address      |  |
| City, State: |  |
| Zip Code     |  |

**3. Individual responsible for causing notice to be published:**

|                            |                  |
|----------------------------|------------------|
| Name:                      | Aron Baggett     |
| Address                    | P.O. Box CC      |
| City, State:               | Ingleside, Texas |
| Zip Code                   | 78362            |
| Telephone Number           | (361) 776-6395   |
| Alternate Telephone Number |                  |
| E-mail                     |                  |

**4. Public place in county where application will be made available<sup>6</sup>:**

|             |                          |
|-------------|--------------------------|
| Name        | Ingleside Public Library |
| Address     | 2775 Waco Street         |
| City, State | Ingleside, Texas         |
| Zip Code    | 78362                    |



**D. Application Type and Facility Status****1. Application Type**☒ **Permit**☐ New☒ **Renewal**☐ Interim Status☐ Compliance Plan☐ RD&D☒ **Amendment**☐ Major☒ **Minor**☐ **Modification**☐ Class 3☐ Class 2☐ Class 1<sup>1</sup>☐ Class 1**2. Part of a Consolidated Permit Processing request? [30 TAC Chapter 33]**

No

**3. Does the application contain confidential material?<sup>7</sup>**

No

**4. Facility Status. Check all that apply**☐ Proposed☒ **Existing**☒ **On-Site**☒ **Off-site**☐ Commercial☐ Recycle☐ Land Disposal☐ Areal or capacity expansion☐ Compliance plan**5. Is the facility within the Coastal Management Program boundary?**

Yes

**6. Description of Application Changes**

Complete Table 1.1 - Description of Proposed Application Changes

**Note: List all changes requested in Table. Unlisted requests risk remaining unaddressed or possibly denied if brought to the permit application reviewer's attention at a later time.****7. Total acreage of the facility being permitted:**

593

**8. Identify the name of the drainage basin and segment where the facility is located<sup>8</sup>**

River Segment

Corpus Christi Bay (Recreational Beaches)

River Basin

Bays and Estuaries - Segment 2481

**E. Facility Siting Summary:**

Is the facility located or proposed to be located:

1. Within a 100-year floodplain?
2. in wetlands?
3. In the critical habitat of an endangered species of plant or animal?
4. On the recharge zone of a sole-source aquifer?
5. In an area overlying a regional aquifer?
6. Within 0.5 mile (2,640 feet) of an established residence, church, school, day care center, surface water body used for public drinking water supply, or dedicated public park?<sup>9</sup> [30 TAC 335.202]  
If Yes: the TCEQ shall not issue a permit for this facility.
7. In an area in which the governing body of the country or municipality has prohibited the processing or disposal of municipal hazardous waste or industrial solid waste?  
If yes: provide a copy of the ordinance or order.

No

No

No

No

Yes

No

No

**F. Wastewater and Stormwater Disposition**

1. Is the disposal of any waste to be accomplished by a waste disposal well at this facility?

No

If Yes: List WDW Permit No(s):

2. Will any point source discharge of effluent or rainfall runoff occur as a result of the proposed activities?

Yes

3. If Yes, is this discharge regulated by a TPDES or TCEQ permit?

☒ Yes

TCEQ Permit No.

WQ0003083000

TPDES Permit No.

TX0104876

☐ No

Date TCEQ discharge permit application filed:

Date TPDES discharge application filed:



**G. Information Required to Provide Notice**

## State Officials List [30 TAC 39]

## State Senator

|              |                                                       |
|--------------|-------------------------------------------------------|
| Name:        | Adam Hinojosa (email: adam.hinojosa@senate.texas.gov) |
| Address      | 1211 U.S. Hwy. 181                                    |
| City, State: | Portland, Texas                                       |
| Zip Code:    | 78374                                                 |

## State Representative

|              |                                                |
|--------------|------------------------------------------------|
| Name:        | J.M. Lozano (email: jm.lozano@house.texas.gov) |
| Address      | 1211 U.S. Hwy. 181, No. 106                    |
| City, State: | Portland, Texas                                |
| Zip Code     | 78374                                          |

## Local Officials List [30 TAC 39]

## Mayor

|              |                                            |
|--------------|--------------------------------------------|
| Name:        | Oscar Adame (email: mayor@inglesidetx.gov) |
| Address      | 2671 San Angelo Street                     |
| City, State: | Ingleside, Texas                           |
| Zip Code     | 78362                                      |

## Local Health Authority

|              |     |
|--------------|-----|
| Name:        | N/A |
| Address      |     |
| City, State: |     |
| Zip Code     |     |

## County Judge

|              |                                                   |
|--------------|---------------------------------------------------|
| Name:        | David Krebs (email: dkrebs@sanpatriciountytx.gov) |
| Address      | 400 West Sinton Street, #109                      |
| City, State: | Sinton, Texas                                     |
| Zip Code     | 78387                                             |

## County Health Authority

|              |                                                       |
|--------------|-------------------------------------------------------|
| Name:        | Gabriel Arroyo (email: garroyo@sanpatriciountytx.gov) |
| Address      | 313 North Rachal Avenue                               |
| City, State: | Sinton, Texas                                         |
| Zip Code     | 78387                                                 |

Based on the questions in the Bilingual Notice Instructions for this form, are you required to make alternate (Bilingual) notice for this application?

Yes

Bilingual Language(s):

Spanish

TCEQ Core Data Form Submitted?(Required)

Yes

Has any information changed on the TCEQ Core Data Form since the last submittal?

No

Signature on Application Submitted?  
(see Section I Instructions, Item c)

Yes

1. Individual, Corporation, or Other Legal Entity Name on the Permit - must match the Secretary of State's database records for the Facility).
2. The legal name and address must match the Core Data Form.
3. If the application is submitted on behalf of a corporation, please identify the Charter Number as recorded with the Office of the Secretary of State for Texas.
4. The operator has the duty to submit an application if the facility is owned by one person and operated by another [30 TAC 305.43(b)]. The permit will specify the operator and the owner who is listed on Part A of this application [Section 361.087, Texas Health and Safety Code].
5. If the application is submitted by a corporation or by a person residing out of state, the applicant register an Agent in Service or Agent of Service with the Texas Secretary of State's office and provide complete mailing address for the agent. The agent must be a Texas resident.
6. For applications for new permits, renewals, major amendments and Class 3 modifications a copy of the administratively complete application must be made available at a public place in the county where the facility is, or will be, located for review and copying by the public. Identify the public place in the county (e.g., public library, county court house, city hall), including the address, where the application will be made available for review and copying by the public.
7. For confidential information cross-reference the confidential material throughout the application to Section XIII: Confidential Material, and submit as a separate Section XIII document or binder conspicuously marked "CONFIDENTIAL".
8. Use the segments line map created by [TCEQ GIS Team](#) to find the Segment Name and Basin Name.
9. Use only for a new commercial hazardous waste management facility or areal expansion of an existing hazardous waste management facility or unit of that facility as defined in 30 TAC 335.202.



## **Attachment I.B**

### **TCEQ Core Data Form**

## **Attachment I.C**

### **Signature Page**



**Signature Page**

I, Todd J. Behne, Plant Manager,  
(Operator) (Title)

certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: T. J. Behne Date: 10/27/2025

**To be completed by the Operator if the application is signed by an Authorized Representative for the Operator**

I, \_\_\_\_\_, hereby designate \_\_\_\_\_  
[Print or Type Name] [Print or Type Name]

as my representative and hereby authorize said representative to sign any application, submit additional information as may be requested by the Commission; and/or appear for me at any hearing or before the Texas Commission on Environmental Quality in conjunction with this request for a Texas Water Code or Texas Solid Waste Disposal Act permit. I further understand that I am responsible for the contents of this application, for oral statements given by my authorized representative in support of the application, and for compliance with the terms and conditions of any permit which might be issued based upon this application.

Printed or Typed Name of Operator or Principal Executive Officer

Signature

SUBSCRIBED AND SWORN to before me by the said Todd Behne

On this 27th day of October, 2025

My commission expires on the 9th day of April, 2029

Notary Public in and for San Patricio County, Texas

[Note: Application Must Bear Signature & Seal of Notary Public]

Patty Kraft



## **Attachment I.E**

### **List and Map of Adjacent Landowners**



**Attachment II.**

**Facility Siting Criteria**

## **General Siting Criteria**

See the General Information Report presented in Attachment V.A of this application for the information related to General Siting Criteria for the facility.



**Table II**

Table II contains the following: Table II.A, Table II.B, Table II.C, Table II.D, Table II.E and Flooding from Section II. F of the Part B Application

**Table II.A - Requirements for Storage or Processing Facilities, Land Treatment Facilities, Waste Piles, Storage Surface Impoundments, and Landfills**

Is the facility located or proposed to be located<sup>1</sup>:

|                                                                                                                                                                                                                                                                                                                               |                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| In wetlands? [as applicable: 30 TAC 335.204(a)(2), (b)(2), (c)(2), (d)(2), and/or (e)(2)]                                                                                                                                                                                                                                     | No             |
| <b>If Yes:</b> the TCEQ shall not issue a permit for a new hazardous waste management facility or areal expansion of an existing facility into wetlands, pursuant to 30 TAC 335.205(a)(1).                                                                                                                                    |                |
| In the critical habitat of an endangered species of plant or animal? <sup>6</sup> [as applicable: 30 TAC 335.204(a)(8), (b)(10), (c)(9), (d)(9), and/or (e)(11)]                                                                                                                                                              | No             |
| <b>If Yes:</b> submit in Section V information demonstrating that design, construction, and operational features will prevent adverse effects on such critical habitat.                                                                                                                                                       |                |
| On the recharge zone of a sole-source aquifer? <sup>2</sup> [30 TAC 335.204(a)(3), (b)(3), (c)(3), (d)(3), and/or (e)(3)]                                                                                                                                                                                                     | No             |
| <b>If Yes:</b> then for storage and processing facilities (excluding storage surface impoundments), submit in Section V information demonstrating that secondary containment is provided to preclude migration to groundwater from spills, leaks, or discharges.                                                              |                |
| In an area overlying a regional aquifer? [as applicable: 30 TAC 335.204(a)(4), (b)(4), (c)(4), (d)(4), and/or (e)(4)]                                                                                                                                                                                                         | Yes, see below |
| <b>If Yes:</b> submit site-specific information in Section V and/or Section VI demonstrating compliance with 30 TAC 335.205(a)(1). See information in Attachment V.A Section 2.4.                                                                                                                                             |                |
| In areas where soil unit(s) are within five feet of the containment structure, or treatment zone, as applicable, that have a Unified Soil Classification of GW, GP, GM, GC, SW, SP, or SM, or a hydraulic conductivity greater than 10-5 cm/sec? [as applicable: 30 TAC 335.204(a)(5), (b)(5), (c)(5), (d)(5), and/or (e)(5)] | No             |
| <b>If Yes:</b> provide additional information in Sections V and/or Section VI demonstrating compliance with 30 TAC 335.205(a)(1)                                                                                                                                                                                              |                |
| In areas of direct drainage within one mile of a lake at its maximum conservation pool level, if the lake is used to supply public drinking water through a public water system? <sup>6</sup> [as applicable: 30 TAC 335.204 (a)(6), (b)(7), (c)(6), and/or (e)(8)].                                                          | No             |
| <b>If Yes:</b> provide information in Section V demonstrating compliance with 30 TAC 335.205(a)(1).                                                                                                                                                                                                                           |                |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| In areas of active geologic processes, including but not limited to erosion, submergence, subsidence, faulting, karst formation, flooding in alluvial flood wash zones, meandering river bank cuttings, or earthquakes? <sup>6</sup> [as applicable: 30 TAC 335.204(a)(7), (b)(8) ,(c)(7), (d)(7), and/or (e)(9)]                                                                                                                                                                                           | No |
| Within 30 feet of the upthrown side or 50 feet of the downthrown side of the actual or inferred surface expression of a fault that has reasonably been shown to have caused displacement of shallow Quaternary sediments or of man-made structures? <sup>6</sup> [as applicable: 30 TAC 335.204(a)(9), (b)(12) ,(c)(11), (d)(11), and/or (e)(13)]                                                                                                                                                           | No |
| <p><b>If Yes:</b> specify in Section V the design, construction, and operational features that will prevent adverse effects resulting from any fault movement.</p> <p>If a fault is found to be present, the width and location of the actual or inferred surface expression of the fault, including both the identified zone of deformation and the combined uncertainties in locating a fault trace, must be determined by a qualified geologist or geotechnical engineer and reported in Section VI.</p> |    |

**Table II.B. - Additional Requirements for Land Treatment Facilities [30 TAC 335.204(b)]:**

Is the land treatment facility located or proposed to be located:

Within 1000 feet of an established residence, church, school, day care center, surface water body used for a public drinking water supply, or dedicated public park which is in use at the time the notice of intent to file a permit application is filed with the commission, or which is in use at the time the permit application is filed with the commission?

**If Yes:** the TCEQ shall not issue a permit for a new hazardous waste land treatment unit or an areal expansion of an existing land treatment unit, pursuant to 30 TAC 335.204(b)(6) and 335.205(a).

Within 1000 feet of an area subject to active coastal shoreline erosion even though the area is protected by a barrier island or peninsula?

**If Yes:** submit in Section V.F design, construction, and operational features which will prevent adverse effects resulting from storm surge and erosion or scouring by water.

Within 5000 feet of a coastal shoreline subject to active shoreline erosion and which is unprotected by a barrier island or peninsula.

**If Yes:** submit Section V.F design, construction and operational features, which will prevent adverse effects resulting from storm surge and erosion or scouring by water.

On a barrier island or peninsula?

**If Yes:** the TCEQ shall not issue a permit for a new hazardous waste land treatment unit or an areal expansion of an existing land treatment unit, pursuant to 30 TAC 335.204(b)(11) and 335.205(a)(1).



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**Table II.C. - Additional Requirements for Waste Piles [30 TAC 335.204(c)]**

Is the waste pile located or proposed to be located:

|                                                                                                                                                                                                     |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Within 1000 feet of an area subject to active coastal shoreline erosion even though the area is protected by a barrier island or peninsula?                                                         |  |
| <b>If Yes:</b> submit in Section V.E design, construction, and operational features on the facility which will prevent adverse effects resulting from storm surge and erosion or scouring by water. |  |
| Within 5000 feet of a coastal shoreline subject to active shoreline erosion and which is unprotected by a barrier island or peninsula.                                                              |  |
| <b>If Yes:</b> submit Section V.E design, construction, and operational features which will prevent adverse effects resulting from storm surge and erosion or scouring by water.                    |  |
| On a barrier island or peninsula? <sup>6</sup>                                                                                                                                                      |  |
| <b>If Yes:</b> the TCEQ shall not issue a permit for a new hazardous waste pile or an areal expansion of an existing waste pile, pursuant to 30 TAC 335.204(c)(10) and 335.205(a)(1).               |  |

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**Table II.D. - Additional Requirements for Storage Surface Impoundments [30 TAC 335.204(d)]**

Is the land treatment facility located or proposed to be located:

|                                                                                                                                                                                                                               |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Within 1000 feet of an area of active coastal shoreline erosion even though the area is protected by a barrier island or peninsula                                                                                            |  |
| <b>If Yes:</b> submit in Section V.D design, construction, and operational features of the facility which will prevent adverse effects resulting from storm surge and erosion or scouring by water.                           |  |
| Within 5000 feet of a coastal shoreline subject to active shoreline erosion and which is unprotected by a barrier island or peninsula.                                                                                        |  |
| <b>If Yes:</b> then submit in Section V.D design, construction, and operational features which will prevent adverse effects resulting from storm surge and erosion or scouring by water.                                      |  |
| On a barrier island or peninsula? <sup>6</sup>                                                                                                                                                                                |  |
| <b>If Yes:</b> the TCEQ shall not issue a permit for a new hazardous waste storage surface impoundment or an areal expansion of an existing storage surface impoundment, pursuant to 30 TAC 335.204(d)(10) and 335.205(a)(1). |  |

**Table II.E. - Additional Requirements for Landfills (and Surface Impoundments Closed as Landfills with wastes in place)**

Is the landfill located or proposed to be located:

|                                                                                                                                                                                                                                                                                                                                                                     |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Within 1000 feet of an established residence, church, school, day care center, surface water body used for a public drinking water supply, or dedicated public park which is in use at the time the notice of intent to file a permit application is filed with the commission, or which is in use at the time the permit application is filed with the commission? |  |
| <b>If Yes:</b> the TCEQ shall not issue a permit for a new hazardous waste landfill or an areal expansion of an existing landfill, pursuant to 30 TAC 335.204(e)(6) and 335.205(a)(1).                                                                                                                                                                              |  |
| (For commercial hazardous waste landfills) in the 100-year flood plain of a perennial stream that is delineated on a flood map adopted by the Federal Emergency Management Agency after September 1, 1985, as zone A1-99, VO, or V1-30?                                                                                                                             |  |
| <b>If Yes:</b> the TCEQ shall not issue a permit for a new hazardous waste landfill or an areal expansion of an existing landfill, pursuant to 30 TAC 335.204(e)(7) and 335.205(a)(1).                                                                                                                                                                              |  |
| Within 1000 feet of an area subject to active coastal shoreline erosion even though the area is protected by a barrier island or peninsula?                                                                                                                                                                                                                         |  |
| <b>If Yes:</b> then submit in Section V.G design, construction, and operational features which will prevent adverse effects resulting from storm surge and erosion or scouring by water.                                                                                                                                                                            |  |
| Within 5000 feet of a coastal shoreline subject to active shoreline erosion and which is unprotected by a barriers island or peninsula.                                                                                                                                                                                                                             |  |
| <b>If Yes:</b> then submit in Section V.G design, construction, and operational features which will prevent adverse effects resulting from storm surge and erosion or scouring by water.                                                                                                                                                                            |  |
| On a barrier island or peninsula?                                                                                                                                                                                                                                                                                                                                   |  |
| <b>If Yes:</b> the TCEQ shall not issue a permit for a new hazardous waste landfill or an areal expansion of an existing landfill, pursuant to 30 TAC 335.204(e)(12) and 335.205(a)(1).                                                                                                                                                                             |  |



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**Flooding (see Section II Instructions, Item F)**

|                                                                                                                                                                                                                                                                                                                                                                                    |                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Is the facility within a 100-year flood plain?                                                                                                                                                                                                                                                                                                                                     | No             |
| Has a flood plain map been provided?                                                                                                                                                                                                                                                                                                                                               | Yes            |
| Has information about flooding levels and events, and other special flooding factors, been provided? <sup>3</sup>                                                                                                                                                                                                                                                                  | No             |
| Do any flood protection devices exist at the facility (e.g., flood walls, dikes, etc.) designed to prevent washout from the 100-year flood? <sup>3</sup>                                                                                                                                                                                                                           | Not Applicable |
| <b>If Yes:</b> provide in Section V an engineering analysis to indicate the various hydrodynamic and hydrostatic forces expected to result at the facility as a consequence of a 100-year flood. [40 CFR 270.14(b)(11)(iv)(A)] <sup>4</sup>                                                                                                                                        |                |
| <b>If No:</b> the applicant shall provide in Section V a plan for constructing flood protection devices and a schedule including specific time frames for completion. Provide engineering analyses to indicate the various hydrodynamic and hydrostatic forces expected to result at the facility as a consequence of a 100-year flood. [40 CFR 270.14(b)(11)(iv)(A)] <sup>5</sup> |                |
| If applicable, and in lieu of the flood protection devices from above, was a detailed description of the procedures to be followed to remove hazardous waste to safety before the facility is flooded provided? <sup>3, 6</sup>                                                                                                                                                    | Not Applicable |
| Additional Information Requirements (see Section II instructions, Item G): Submitted?                                                                                                                                                                                                                                                                                              |                |

1. Provide the source of information for all questions in the appendix.
2. Note: Land treatment facilities, waste piles, storage surface impoundments, and landfills may not be located on the recharge zone of a sole-source aquifer.
3. Only required to be submitted if the facility is subject to inundation as a result of a 100-year flood event.
4. Include structural or other engineering studies showing the design of operational units (e.g., tanks, incinerators) and flood protection devices (e.g., flood walls, dikes) at the facility and how these will prevent washout. [40 CFR 270.14(b)(11)(iv)(B)]
5. Include structural or other engineering studies showing the design of operational units (e.g., tanks, incinerators) and flood protection devices (e.g., flood walls, dikes) at the facility and how these will prevent washout. [40 CFR 270.14(b)(11)(iv)(B)]
6. The standards contained in §335.204(a)(6) - (9), (b)(7) - (12), (c)(6) - (11), (d)(6) - (11), and (e) (8) - (13) are not applicable to facilities that have submitted a notice of intent to file a permit application pursuant to §335.391 of this title (relating to Pre-Application Review) prior to May 3, 1988, or to facilities that have filed permit applications pursuant to §335.2(a) of this title which were submitted in accordance with Chapter 305 of this title and that were declared to be administratively complete pursuant to §281.3 of this title (relating to Initial Review) prior to May 3, 1988.[ 30 TAC 335.201(b)]

**Attachment III.**

**Facility Management**

## **Attachment III.A**

### **Compliance History and Applicant Experience**



## **Attachment III.B**

### **Training Plan**

## **Attachment III.B**

### **Training Plan**

**OxyChem**  
**Ingleside, Texas**

### 3.0 Content of RCRA Training Program

Training is administered to two groups of individuals: (1) All Hazardous Waste Management Personnel and (2) VCM Incinerator and Drum Storage Personnel. Each is designed to provide training for specific duties according to job function and job classification. Training is conducted for individuals if their respective unit(s) were in operation during the calendar year.

All employees involved in hazardous waste management participate in an initial training course and annual refresher training. The training programs may consist of classroom, video, books and manuals, stand-up safety meetings, on-the-job classes, and/or computer-based programs. Exams are given after completion of the initial training course.

New employees must receive training within 6 months of beginning employment. In addition, inexperienced operators are not allowed to work unsupervised in the ~~incineration~~ halogen acid furnace (HAF) area (including the storage tanks) and hazardous waste container storage areas until they have completed the formal training program and have passed the written exam and a verbal and demonstrative walk-through test. Immediately after completion of their qualification training, they are closely monitored by their shift supervisor, through visual observation of their work practices, for eight working days (64 working hours) as an additional training requirement.

General training outlines and specific training outlines for all waste management personnel are provided in Tables III.B-1 through III.B-3. Training outlined in Tables III.B-1 and III.B-2 is less field-oriented, with emphasis placed on understanding the process and procedures, operating and permit restrictions, safety and environmental requirements, policy guidelines, hazards, recordkeeping requirements, and emergency coordination. The Table III.B-3 training program emphasizes safe and environmentally proper operation, recordkeeping, and inspection needs, equipment operating procedures, personal safety, operating hazards, key operating parameters, cutoffs, and alarms.

#### 3.1 Introductory Training (Table III.B-1)

The introductory training is designed to acquaint facility personnel with hazardous waste management units, management practices, and regulatory and permit requirements. Appropriate training materials are prepared and circulated among personnel to familiarize them with RCRA and the safe handling of hazardous wastes.



### 3.2 Annual Refresher Training (Table III.B-2)

The annual training program is designed to refresh employees in the introductory training program. The annual training program will help all employees involved with hazardous waste management to maintain proficiency, to learn new techniques and procedures, to reinforce safety and quality consciousness, and to introduce any new environmental operating restrictions or requirements.

### 3.3 Periodic Training (Table III.B-3)

Operating technicians involved with hazardous waste management complete Level 3 Training programs every three years in order to meet job-specific training needs according to job positions. These training programs cover in-depth operation of the ~~furnaces incinerators~~ and management of hazardous waste container storage areas. Following the completion of the training, the operating technicians take a written exam.

In addition to the formal training, the facility maintains current Standard Operating Procedures (SOPs) and Standard Operating Limits (SOLs) which are available to all hazardous waste management personnel. The SOPs and SOLs contain emergency procedures, process control narratives, permit limitations, and general process information.

Training on various safety procedures is also conducted every three years to all personnel.

### Table III.B-3 Periodic Refresher Training Outline for VCM Incinerator Technicians and Container Storage Operators

#### 1.0 GENERAL

- Department safety requirements
- Hazards review
- Regulatory requirements overview for hazardous waste operation
- Satellite Accumulation Requirements
- Land Disposal Restriction standards

#### 2.0 PROCESS DESCRIPTION

##### 2.1 ~~HALOGEN ACID FURNACES~~ ~~INCINERATORS~~ / INDIVIDUAL PROCESS CONTROLS

- Operating techniques
- Process flows
- Fire box
- Waste heat boiler
- Quench zone
- HCl absorber
- Dehumidifier / Caustic scrubber
- Knockout Pot / Blower / Stack
- Automatic cut-off systems / Alarm and shutdown parameters
- Pump and Blower description
- operating permit requirements

##### 2.2 TANKS / INDIVIDUAL PROCESS CONTROLS

- Operating techniques
- Liquid waste feed
- Vent collection system
- valve locations
- Seals
- Pumps
- Operating permit requirements
- Alarms and shutdown parameters

##### 2.3 CONTAINER STORAGE AREAS

- Drum / container management techniques
- Labeling
- Aisle space

- Containment systems
- Segregation of incompatible wastes
- Inspections

### 3.0 MAINTENANCE

- Operator responsibilities

### 4.0 SAFETY

- General department policies
- Operator responsibilities
- Hazardous substances
- Personnel protection and first aid
- Safety guidelines
- Waste segregation
- Personnel safety policies
- Work permits
- Lock/Tag/Try procedures
- Personnel protective equipment
- Hazard communications procedure
- Respiratory protection

### 5.0 ENVIRONMENTAL

- Purpose of ~~furnaces~~~~incinerators~~
- Environmental operating guidelines
  - Stack emissions
  - Inspections
  - Tank inventory check
  - Drum / container management

### 6.0 EMERGENCY PROCEDURES

- Emergency equipment
- ~~Furnace~~~~incinerator~~ shutdown procedures
- Storage tank shutdown procedures
- Specific emergencies
  - Fire outside the firebox
  - Electrical power outage
  - Loss of HCL absorber pumps
  - loss of cooling water pumps
  - Loss of cooling water supply
  - Boiler tube leak
  - Major acid leak



- Use, inspection, repair, and replacement of
  - Alarm systems
  - Automatic cut - off systems
  - Communication systems

### Maintenance Manager

The Maintenance Manager is responsible for all maintenance activities at the plant. He/She reports to the Assistant Plant Manager and oversees maintenance related to Plant Outages and Maintenance budgets.

Minimum qualifications include a B.S. degree in mechanical engineering or relevant field and 5 years experience.

### Maintenance Superintendent

The Maintenance Superintendent, who reports to the Maintenance Manager, directly supervises all maintenance personnel at the plant. Minimum qualifications include a B.S. degree in mechanical engineering or relevant field and 3 years experience.

### Maintenance Personnel

Maintenance personnel are responsible for maintaining, repairing, and replacing the plant's mechanical parts, equipment, and instrumentation. They report to the Maintenance Superintendent who assigns work each day on an as-needed basis.

Minimum qualifications include a high school diploma and knowledge of mechanics and the required initial training for maintenance personnel at the plant.

### VCM Incinerator Technician

The Incinerator Technician is responsible for the hands-on operation of the ~~halogen acid furnaces~~~~incinerators~~. His/Her work is directed by the Shift Supervisor.

The Incinerator Technician: 1) initiates process changes, as needed, to operate the ~~furnaces~~~~incinerators~~ within safe and allowable ranges; 2) monitors instrumentation and equipment to assure safe and reliable operation; 3) records required information on log sheets and forms; 4) initiates work orders to repair equipment; 5) monitors area access and writes permits for entry on work done to vessels and equipment; 6) reports and communicates the status of the process to other area operators and supervisors; 7) inspects the area and equipment as required; and 8) assists supervisors in training other operators for qualification in this area.

- Monitors all transfers of containers into and out of the areas.

Minimum qualifications include a high school diploma and completion of the initial RCRA training program followed by refresher training.

Table III.B-4 summarizes the training requirements for each of the hazardous waste management personnel listed above.

**Table III.B-4 Hazardous Waste Management Personnel**

| <b><u>Job Title</u></b>                                       | <b><u>Required<br/>Introductory<br/>Training</u></b> | <b><u>Required<br/>Annual<br/>Training</u></b> | <b><u>Required<br/>Periodic<br/>Training<sup>†</sup></u></b> |
|---------------------------------------------------------------|------------------------------------------------------|------------------------------------------------|--------------------------------------------------------------|
| Plant Manager                                                 | Table III.B-1                                        | Table III.B-2                                  |                                                              |
| Assistant Plant Manager                                       | Table III.B-1                                        | Table III.B-2                                  |                                                              |
| Safety Manager                                                | Table III.B-1                                        | Table III.B-2                                  |                                                              |
| Environmental Manager                                         | Table III.B-1                                        | Table III.B-2                                  |                                                              |
| Environmental Superintendent                                  | Table III.B-1                                        | Table III.B-2                                  |                                                              |
| Environmental Engineer(s)                                     | Table III.B-1                                        | Table III.B-2                                  |                                                              |
| VCM Environmental Supervisor                                  | Table III.B-1                                        | Table III.B-2                                  |                                                              |
| Plant Training Supervisor                                     | Table III.B-1                                        | Table III.B-2                                  |                                                              |
| VCM Operations Manager                                        | Table III.B-1                                        | Table III.B-2                                  |                                                              |
| Operations Superintendent, Shift, and<br>Day Area Supervisors | Table III.B-1                                        | Table III.B-2                                  |                                                              |
| Maintenance Manager                                           | Table III.B-1                                        | Table III.B-2                                  |                                                              |
| Maintenance Superintendent                                    | Table III.B-1                                        | Table III.B-2                                  |                                                              |
| Maintenance Personnel                                         | Table III.B-1                                        | Table III.B-2                                  |                                                              |
| VCM Incinerator Technician                                    | Table III.B-1<br>Table III.B-3                       | Table III.B-2                                  | Table III.B-3                                                |
| VCM Container Storage Technician                              | Table III.B-1<br>Table III.B-3                       | Table III.B-2                                  | Table III.B-3                                                |



## **Attachment III.C**

### **Security**

## **Attachment III.D**

### **Inspection Schedule**

## **Attachment III.E**

### **Contingency Plan**

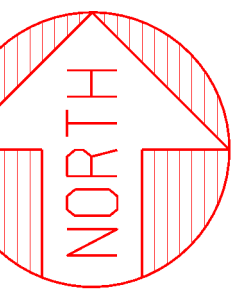


**Table III.E.2 - Emergency Coordinators**

| Name                    | Home Address                                                              | Office Phone(s)<br>and/or Pager | Home Phone(s)  |
|-------------------------|---------------------------------------------------------------------------|---------------------------------|----------------|
| Primary                 |                                                                           |                                 |                |
| Primary Darren Rudowsky | Safety Superintendent<br>6317 Legacy Point<br>Corpus Christi, TX<br>78414 | (361) 775-7274                  | (361) 929-6690 |

| Name                       | Home Address                                                                | Office Phone(s)<br>and/or Pager | Home Phone(s)  |
|----------------------------|-----------------------------------------------------------------------------|---------------------------------|----------------|
| Alternate William Griffith | Assistant Plant<br>Manager<br>106 Alta Plaza<br>Corpus Christi, TX<br>78411 | (361) 776-6168                  | (205) 587-6929 |
| Alternate                  |                                                                             |                                 |                |
| Alternate Adam Brewer      | Assistant Plant<br>Manager<br>176 James Road<br>Tivoli, TX 77990            | (361) 776-6161                  | (361) 222-9023 |





U.S. HWY 361

COUNTY RD 93

FURNACES  
CCIN-1 & CCIN-2 &  
TANKS C-720A & C-720B  
(ACTIVE)

VCM CONTAINER  
STORAGE AREA  
(ACTIVE)

WASTE WATER SLUDGE  
CONTAINER STORAGE  
AREA (CLOSED)

TANK 6D-02 (CLOSED)

AIR LIQUIDE

DUPONT

CHLOR-ALKALI  
CONTAINER STORAGE  
AREA (CLOSED)

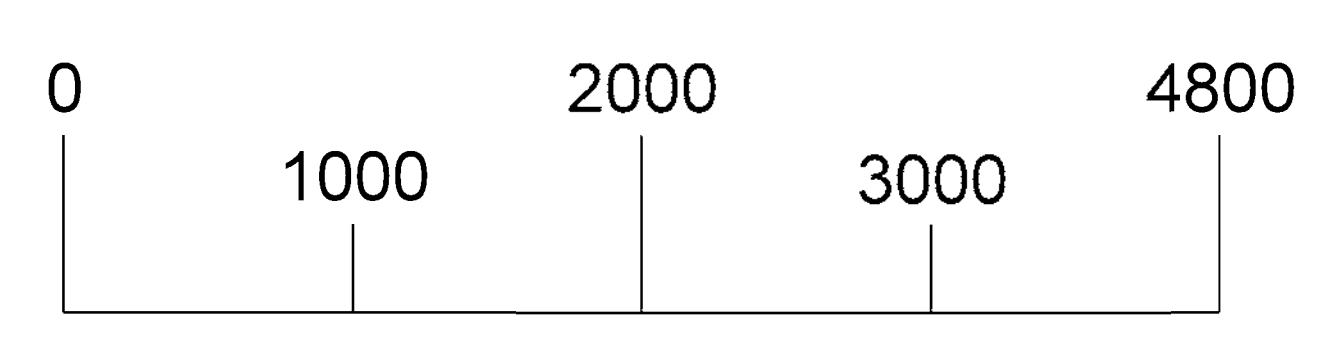
DUPONT

CORPUS CHRISTI BAY

CITY OF  
INGLESIDE

EMERGENCY RESPONSE FACILITY  
- FIRE TRUCKS  
- SPILL RESPONSE EQUIPMENT  
- EMERGENCY RESPONSE PPE

EMERGENCY EQUIPMENT LOCATION MAP



SCALE: 1" = 2000'-0"



## **Attachment IV.**

### **Wastes and Waste Analysis**

## **Attachment IV.B**

### **Wastes Managed in Permitted Units**



**Table IV.B. – Wastes Managed In Permitted Units**

| No. | Waste                                                    | EPA Hazardous Waste Numbers                                                                    | TCEQ Waste Form Codes and Classification Codes |
|-----|----------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------|
| 1   | Oil and/or Solvent Contaminated Solids (including soils) | D028, D040, D043, F001, F003, K019, K020, U043, U077                                           | 0106489H<br>0108407H<br>0241301H<br>0301301H   |
| 2   | Spent Paint Thinner                                      | D001, D035, F003, F005                                                                         | 0117211H                                       |
| 3   | Waste Paint Solids                                       | F003, F005                                                                                     | 0133409H                                       |
| 4   | Waste Oil                                                | D001, D028, D040, F001, F002                                                                   | 0136206H                                       |
| 5   | Waste Resin, Sealant, or Varnish                         | D001, D003, F003                                                                               | 0138219H<br>0140209H<br>0196409H               |
| 6   | Fuel Oil Contaminated Water                              | D001, D018                                                                                     | 0177205H                                       |
| 7   | Spent Carbon Canisters and Can Residue                   | D001, D035, D040, F003                                                                         | 0190404H<br>0192204H<br>0196409H               |
| 8   | Biosolids                                                | F001, F003, F005, F025, K019, K020                                                             | 0228491H                                       |
| 9   | Reboiler Scale                                           | D007, D019, D022, D028, D032, D040                                                             | 0229407H                                       |
| 10  | EDC Contaminated Material                                | D028, F024                                                                                     | 0238319H                                       |
| 11  | Incinerator Ash/Brick                                    | F001, F003, F005, F025, K019, K020                                                             | 0242303H<br>0243319H                           |
| 12  | VCM Furnace Coke                                         | D001, D006, D007, D028, D043                                                                   | 0244407H                                       |
| 13  | Spent Catalyst                                           | D028, F001, F003, F005, F025, K019, K020                                                       | 0246393H<br>0298393H                           |
| 14  | VCM Trench Material                                      | D028, D043, K019, K020, U077                                                                   | 0247319H                                       |
| 15  | VCM Heavy Ends*                                          | D001, D007, D019, D021, D022, D027, D028, D029, D032, D033, D034, D036, D039, D040, K019, K020 | 0248219H<br>219H<br>202H                       |
| 16  | VCM Contaminated Filters/Carbon                          | D043, F025                                                                                     | 0249310H<br>0250404H                           |
| 17  | VCM Light Ends*                                          | D001, D018, D019, D022, D028, D029, D040, F025                                                 | 0251219H<br>219H                               |
| 18  | Limestone Sludge                                         | F001, F003, F005, F025, K019, K020                                                             | 0253306H                                       |
| 19  | Rockbox Residue                                          | F001, F003, F005, F025, K019, K020                                                             | 0255319H                                       |
| 20  | Mother Liquor                                            | D001, K019, K020                                                                               | 0258219H                                       |
| 21  | Incinerator Flue Gas Scale                               | F001, F003, F005, F025, K019, K020                                                             | 0289303H                                       |

| No. | Waste                             | EPA Hazardous Waste Numbers                                      | TCEQ Waste Form Codes and Classification Codes |
|-----|-----------------------------------|------------------------------------------------------------------|------------------------------------------------|
| 22  | VCM Incinerator Acid              | D002, F001, F003, F005, F025, K019, K020                         | 0293105H                                       |
| 23  | EDC Heavy Ends*                   | D001, D002, D021, D022, D027, D028, D034, D036, D039, D040, K019 | 0339219H<br>219H<br>204H                       |
| 24  | Chlorine Butter, Solids, Elements | D019, D022, D032, D034, D037, D039, D040, D042                   | 0406609H<br>0405403H<br>0411319H               |
| 25  | Natural Gas Condensate            | D009, D018                                                       | 0504219H                                       |
| 26  | Wastewater Solids/Sand            | F001, F003, F005, F025, K019, K020                               | 0276407H<br>0294319H                           |
| 27  | Other Inorganic Waste             | Various                                                          | Various                                        |
| 28  | Other Organic Waste               | Various                                                          | Various                                        |

\* - Wastes received from off-site sources.

## **Attachment IV.C**

### **Sampling and Analytical Methods**

**Table IV.C. – Sampling and Analytical Methods**

| Waste No. <sup>1</sup> | Sampling Location                                 | Sampling Method <sup>2</sup> | Frequency              | Parameter                                              | Test Method <sup>2</sup>                           | Desired Accuracy Level <sup>3</sup>            |
|------------------------|---------------------------------------------------|------------------------------|------------------------|--------------------------------------------------------|----------------------------------------------------|------------------------------------------------|
| 1                      | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 2                      | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 3                      | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 4                      | Sample taps at waste feed loops and/or feed lines | Grab                         | Annual <sup>4</sup>    | Ash<br>Hg<br>As, Be, Cd, Cr, Pb<br>Cl <sub>2</sub> /Cl | ASTM D482<br>EPA 7470<br>EPA 6010/6020<br>EPA 9056 | 0.02 Wt%<br>5 mg/Kg<br>5 mg/Kg<br>15,000 mg/Kg |
| 5                      | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 6                      | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 7                      | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 8                      | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 9                      | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |



| Waste No. <sup>1</sup> | Sampling Location                                 | Sampling Method <sup>2</sup> | Frequency              | Parameter                                              | Test Method <sup>2</sup>                           | Desired Accuracy Level <sup>3</sup>            |
|------------------------|---------------------------------------------------|------------------------------|------------------------|--------------------------------------------------------|----------------------------------------------------|------------------------------------------------|
| 10                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 11                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 12                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 13                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 14                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 15                     | Sample taps at waste feed loops and/or feed lines | Grab                         | Annual <sup>4</sup>    | Ash<br>Hg<br>As, Be, Cd, Cr, Pb<br>Cl <sub>2</sub> /Cl | ASTM D482<br>EPA 7470<br>EPA 6010/6020<br>EPA 9056 | 0.02 Wt%<br>5 mg/Kg<br>5 mg/Kg<br>15,000 mg/Kg |
| 16                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 17                     | Sample taps at waste feed loops and/or feed lines | Grab                         | Annual <sup>4</sup>    | Ash<br>Hg<br>As, Be, Cd, Cr, Pb<br>Cl <sub>2</sub> /Cl | ASTM D482<br>EPA 7470<br>EPA 6010/6020<br>EPA 9056 | 0.02 Wt%<br>5 mg/Kg<br>5 mg/Kg<br>15,000 mg/Kg |
| 18                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |

| Waste No. <sup>1</sup> | Sampling Location                                 | Sampling Method <sup>2</sup> | Frequency              | Parameter                                              | Test Method <sup>2</sup>                           | Desired Accuracy Level <sup>3</sup>            |
|------------------------|---------------------------------------------------|------------------------------|------------------------|--------------------------------------------------------|----------------------------------------------------|------------------------------------------------|
| 19                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 20                     | Sample taps at waste feed loops and/or feed lines | Grab                         | Annual <sup>4</sup>    | Ash<br>Hg<br>As, Be, Cd, Cr, Pb<br>Cl <sub>2</sub> /Cl | ASTM D482<br>EPA 7470<br>EPA 6010/6020<br>EPA 9056 | 0.02 Wt%<br>5 mg/Kg<br>5 mg/Kg<br>15,000 mg/Kg |
| 21                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 22                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 23                     | Sample taps at waste feed loops and/or feed lines | Grab                         | Annual <sup>4</sup>    | Ash<br>Hg<br>As, Be, Cd, Cr, Pb<br>Cl <sub>2</sub> /Cl | ASTM D482<br>EPA 7470<br>EPA 6010/6020<br>EPA 9056 | 0.02 Wt%<br>5 mg/Kg<br>5 mg/Kg<br>15,000 mg/Kg |
| 24                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 25                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 26                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 27                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |

| Waste No. <sup>1</sup> | Sampling Location | Sampling Method <sup>2</sup> | Frequency              | Parameter                                 | Test Method <sup>2</sup> | Desired Accuracy Level <sup>3</sup> |
|------------------------|-------------------|------------------------------|------------------------|-------------------------------------------|--------------------------|-------------------------------------|
| 28                     | Container         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization | Various                  | As per analytical methods           |

<sup>1</sup> From Table IV.B, first column

<sup>2</sup> Sampling and Test/Analysis methods should be specified in enough detail to allow determination of whether they are suitable and correct for the purpose indicated while allowing flexibility in selection and future updates to the specified method. Standard methods, such as those from SW-846, will generally require no further submittal. Non-standard and proprietary methods may require additional information to determine suitability. ASTM methods may require submittal of a copy of the specified method.

<sup>3</sup> Desired Accuracy Level should provide a specified numeric minimum performance level (maximum acceptable reporting limit) for method detection and quantitation limits that will be accepted from the laboratory performing the analysis and must ensure that reported data will allow determinations of compliance with regulatory limits for the parameter tested.

<sup>4</sup> – Only if waste stream is managed in HAFs CCIN-1 and/or CCIN-2 during the calendar year.

<sup>5</sup> – Based on process knowledge.

## **Attachment IV.D**

### **Waste Analysis Plan**



# **Attachment IV.D**

## **Waste Analysis Plan**

**OxyChem**  
**Ingleside, Texas**

## 1.0 Introduction

This waste analysis and sampling plan describes the analytical methods which will be followed by OxyChem's Ingleside plant to ensure that hazardous wastes generated at the plant are managed in an environmentally appropriate manner.

This ~~e~~-plan has been developed to comply with federal RCRA regulations contained in 40 CFR 264.13 and 26~~6.102(a)(2)(ii)~~ ~~4.341~~ and 30 TAC Chapter 335.152. The cited regulations state that detailed chemical and physical analysis of a representative sample of the waste must be obtained which will, at a minimum, contain all of the information needed to treat, store, or dispose of the waste. The regulations further state that the detailed analyses will be repeated as necessary to ensure that the waste characteristics remain accurate and up-to-date with any process changes that may materially affect waste characteristics.

## 2.0 Description of Hazardous Waste Management Units

OxyChem's Ingleside, Texas plant operates two identical halogen acid furnaces (HAFs)~~induced draft organic chloride incinerators~~, CCIN-1 and CCIN-2. These furnaces~~incinerators~~ are an integral part of the vinyl chloride monomer (VCM) process units. They are used for the control of volatile organic compound (VOC) emissions from process operations and for the destruction of liquid hazardous wastes generated on-site and from three (3) off-site OxyChem sites.

The two HAF units were originally regulated as incinerators under the RCRA regulations. Effective September 11, 2003, these units~~incinerators~~ became subject to the Hazardous Waste Combustor (HWC) MACT regulations of 40 CFR Part 63, Subpart EEE. During the 2014 and 2015 Part B Permit Renewal process, the units were properly reclassified as HAFs under the RCRA regulations.

Prior to combustion in the HAF units, liquid hazardous waste streams are stored in two tanks, C-720A and C-720B. Occasionally, the wastes stored in these tanks are sent for off-site treatment.

Hazardous wastes that cannot be combusted in the HAFs are containerized for off-site treatment and/or disposal. The containerized wastes are stored on-site in the VCM Container Storage Area or other authorized waste management units.

This Waste Analysis Plan (WAP) is required for the treatment and storage of hazardous wastes at the facility. The HWC MACT regulations require a~~-A~~ Feedstream Analysis Plan (FAP). As such, any analyses~~is required under the HWC MACT regulations. Analysis~~ of the hazardous wastes treated in the HAFs are~~incinerators is described in the FAP. Therefore, Since the HWC MACT supersedes the RCRA requirements for the waste streams treated in the incinerators, the Waste Analysis Plan requirements for these waste streams are not included.~~

~~Hazardous wastes that cannot be incinerated are containerized for off-site disposal and are stored in on-site Container Storage areas or other authorized waste management units. This WAP outlines the plans for sampling and analyzing these waste streams that are stored onsite and/or shipped offsite.~~

### 3.0 Waste Description

Currently, the plant manages several hazardous waste streams registered with the TCEQ which have been or may be generated on-site or received from off-site. These wastes may be treated in the CCIN-1 and CCIN-2 ~~HAFs incinerators~~ or shipped off-site for disposal or treatment. These wastes are identified in Table 3-1.

**Table 3-1 Hazardous Waste List**

| <b>Waste Description</b>               | <b>EPA Waste Code(s)</b>                             | <b>TCEQ Waste Code(s)</b>                    |
|----------------------------------------|------------------------------------------------------|----------------------------------------------|
| Oil and/or Solvent Contaminated Solids | D028, D040, D043, F001, F003, K019, K020, U043, U077 | 0106489H<br>0108407H<br>0241301H<br>0301301H |
| Spent Paint Thinner                    | D001, D035, F003, F005                               | 0117211H                                     |
| Waste Paint Solids                     | F003, F005                                           | 0133409H                                     |
| Waste Oil                              | D001, D028, D040, F001, F002                         | 0136206H                                     |
| Waste Resin, Sealant, or Varnish       | D001, D003, F003                                     | 0138219H<br>0140209H<br>0196409H             |
| Fuel Oil Contaminated Water            | D001, D018                                           | 0177205H                                     |
| Spent Carbon Canisters and Can Residue | D001, D035, D040, F003                               | 0190404H<br>0192204H<br>0196409H             |
| Biosolids                              | F001, F003, F005, F025, K019, K020                   | 0228491H                                     |
| Reboiler Scale                         | D007, D019, D022, D028, D032, D040                   | 0229407H                                     |
| EDC Contaminated Material              | D028, F024                                           | 0238319H                                     |
| Incinerator Ash/Brick                  | F001, F003, F005, F025, K019, K020                   | 0242303H<br>0243319H                         |
| VCM Furnace Coke                       | D001, D006, D007, D028, D043                         | 0244407H                                     |
| Spent Catalyst                         | D028, F001, F003, F005, F025, K019, K020             | 0246393H<br>0298393H                         |
| VCM Trench Material                    | D028, D043, K019, K020, U077                         | 0247319H                                     |



**Table 3-1 Hazardous Waste List (continued)**

| <b>Waste Description</b>          | <b>EPA Waste Code(s)</b>                                                                                | <b>TCEQ Waste Code(s)</b>        |
|-----------------------------------|---------------------------------------------------------------------------------------------------------|----------------------------------|
| VCM Heavy Ends*                   | D001, D007, D019, D021,<br>D022, D027, D028, D029,<br>D032, D033, D034, D036,<br>D039, D040, K019, K020 | 0248219H<br>219H<br>202H         |
| VCM Contaminated Filter/Carbon    | F025, D043                                                                                              | 0249310H<br>0250404H             |
| VCM Light Ends*                   | D001, D018, D019, D022,<br>D028, D029, D040, F025                                                       | 0251219H<br>219H                 |
| Limestone Sludge                  | F001, F003, F005, F025,<br>K019, K020                                                                   | 0253306H                         |
| Rockbox Residue                   | F001, F003, F005, F025,<br>K019, K020                                                                   | 0255319H                         |
| Mother Liquor                     | D001, K019, K020                                                                                        | 0258219H                         |
| Incinerator Flue Gas Scale        | F001, F003, F005, F025,<br>K019, K020                                                                   | 0289303H                         |
| VCM Incinerator Acid              | D002, F001, F003, F005,<br>F025, K019, K020                                                             | 0293105H                         |
| EDC Heavy Ends*                   | D001, D002, D021, D022,<br>D027, D028, D034, D036,<br>D039, D040, K019                                  | 0339219H<br>219H<br>204H         |
| Chlorine Butter, Solids, Elements | D019, D022, D032, D034,<br>D037, D039, D040, D042                                                       | 0406609H<br>0405403H<br>0411319H |
| Natural Gas Condensate            | D009, D018                                                                                              | 0504219H                         |
| Wastewater Solids/Sand            | F001, F003, F005, F025,<br>K019, K020                                                                   | 0276407H<br>0294319H             |
| Other Inorganic Waste             | Various                                                                                                 | Various                          |
| Other Organic Waste               | Various                                                                                                 | Various                          |

\* - This hazardous waste stream may be received from offsite sources.

## 4.0 Waste Analysis

Wastes will be analyzed for characterization purposes so that they may be properly managed. The waste characteristics for the hazardous waste streams presently generated at the OxyChem plant are reviewed and analyzed as needed. The analytical data is maintained on-site.

### 4.1 Analysis ~~of for~~ Waste ~~Streams Designated for Off-Site Disposal~~

All of the wastes identified in Table 3-1 are candidates for on-site storage and/or off-site treatment/disposal at an authorized TSDF, ~~although five of the waste streams identified in Table 3-1 may be incinerated on-site (i.e., EDC heavy ends, VCM heavy ends, and VCM light ends, mother liquor, and waste oil) may be combusted onsite in the HAF units.~~ Analyses of the waste ~~streams designated for on-site storage and/or to be shipped off-site shipment for disposal~~ will be performed, if necessary, in order to adequately classify these streams. In addition, they will be analyzed for those parameters required by the off-site facility accepting the waste streams.

Waste analysis requirements for specific waste management methods are conducted pursuant to 40 CFR 264.17 (ignitable, reactive, or incompatible waste), 40 CFR Section 264.314 (bulk and containerized liquids), and 40 CFR Section 268.7 (land disposal restrictions). For ignitable waste, OxyChem assumes the ignitability hazard is present based on laboratory analyses and process knowledge. Therefore, all off-site shipments of these wastes are designated as ignitable and flammable. OxyChem relies upon knowledge of current processes in determining that reactive wastes are not currently generated.

With respect to bulk and containerized liquids, OxyChem's procedures require that: 1) a waste container cannot contain free liquids unless the entire contents are characterized as a liquid; and 2) sufficient absorbent is added to sludge-like waste to ensure that liquids are not present. In addition, the paint filter test is periodically conducted on selected off-site shipments to verify the absence of free liquids. With respect to the land disposal restrictions, OxyChem conducts the necessary analysis (e.g., TCLP, etc. for example) to ensure that the waste is properly characterized and that proper TCEQ and USEPA waste codes are assigned. This information enables OxyChem to properly complete the shipping manifest and the land disposal restriction notification for each waste shipment.

### 4.2 Analytical Methods

Testing may be performed by an independent laboratory or OxyChem's on-site plant laboratory using the analytical methods specified in Table 4-1. Methods are generally those specified in EPA Manual SW-846, or in some cases where SW-846 does not address the parameter, another appropriate reference method is used (e.g., ASTM, etc.).

**Table 4-1 Analytical Methods**

| Parameter                                                                                           | Method Type                                                  | Method Number                                    | References                                |
|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------|-------------------------------------------|
| Appearance                                                                                          | Description of Waste, i.e., color, consistency, odor, phases | N/A                                              | N/A                                       |
| Specific Gravity/<br>Density                                                                        | Weight compared to water                                     | D1429 / D1429                                    | ASTM                                      |
| Ash                                                                                                 | Gravimetric                                                  | D482                                             | ASTM                                      |
| Viscosity                                                                                           | Saybolt or Cannon Fenske<br>Viscosimeter                     | D445                                             | ASTM                                      |
| Heating Value                                                                                       | Bomb Calorimeter                                             | D240                                             | ASTM                                      |
| Total Organic Halides                                                                               | Oxidative                                                    | 9076                                             | SW-846                                    |
|                                                                                                     | Combustion                                                   |                                                  |                                           |
|                                                                                                     | Coulometric                                                  |                                                  |                                           |
|                                                                                                     | Titration                                                    |                                                  |                                           |
| Organics:<br>Volatiles<br>Semivolatiles                                                             | GC/MS                                                        | 8260                                             | SW-846                                    |
|                                                                                                     | GC/MS                                                        | 8270                                             | SW-846                                    |
| <u>Mercury</u>                                                                                      | <u>CVAAS</u><br><u>CVAAS</u><br><u>ICP-AES</u>               | <u>7470/7471</u><br><u>245.1</u><br><u>200.7</u> | <u>SW-846</u><br><u>EPA</u><br><u>EPA</u> |
| Metals:<br>Arsenic, Barium,<br>Cadmium, Chromium,<br>Lead, <del>Mercury</del> ,<br>Selenium, Silver | ICP                                                          | 6010                                             | SW-846                                    |

REFERENCES:

- ASTM: Annual Book of ASTM Standards, Petroleum Products, Lubricants, and Fossil Fuels, American Society for Testing and Materials
- SW-846: Test Methods for Evaluating Solid Waste, SW-846, USEPA

### 4.3 Analytical Quality Assurance

The quality of the waste analyses will be assured by performing the appropriate laboratory quality control (QC) procedures. The plant Environmental Group, in conjunction with the plant laboratory supervisor, will ensure that the laboratory performing the analyses follows appropriate QC procedures. Example of appropriate procedures, for illustrative purposes, includes:

1. Use of EPA-acceptable sample preparation and analytical methods, as specified by the analytical procedure.
2. Calibration of laboratory instruments to within acceptable limits according to EPA or manufacturer's specifications before, after, and during (as appropriate) use. Reference standards must be used when necessary.
3. Periodic inspection, maintenance, and necessary service of all laboratory instruments and equipment.
4. The use of reference standards and QC samples (e.g., checks, spikes, laboratory blanks, duplicates, splits, etc.) as necessary to determine the accuracy and precision of procedures, instruments, and operators.
5. The use of adequate statistical procedures (e.g., QC charts, etc.) to monitor the precision and accuracy of the data and to establish acceptable limits.
6. The continuous review of results to identify and correct problems within the measurement system (e.g., instrumentation problems, inadequate operator training, inaccurate measurement techniques, etc.).
7. Documenting the performance of systems and operators.
8. Regular participation in external laboratory evaluations (including the EPA Performance Audit Program) to determine accuracy and overall performance of the laboratory. This should include performance evaluation and interlaboratory comparison studies, and formal field unit/laboratory evaluation and inspections.
9. Use of acceptable sample identification and, as necessary, formal chain-of-custody procedures in the laboratory.
10. Maintenance and storage of records, charts, and logs of all pertinent laboratory calibration, analytical, and QC activities and data.
11. Ensuring data outputs are presented in the prescribed format.

Further, the quality assurance program will include the requirements outlined in the TCEQ's "Quality Assurance Project Plan for Environmental Monitoring and Measurement Activities Relating to the Resource Conservation and Recovery Act and Underground Injection Control".



## 5.0 Waste Sampling

Sampling methods may vary depending on the location (accessibility), form, and consistency of the particular waste. All sampling methods are based upon those specified in EPA Manual SW-846. The objective of sample collection is to obtain waste samples for analysis which are descriptive of the waste's average composition over time and/or spatial distribution.

Sample collection procedures are described according to the type of unit in which the waste is contained.

### 5.1 Sampling Methods

#### Containers

Liquid samples from drums will be obtained using a Coliwasa (SW-846) or glass tube (approximately ½-inch diameter by 3-feet long). The tube will be lowered through the bung down to the bottom of the drum, stoppered, and then pulled out. Each grab sample will be poured into a clean glass jar. It may take several grab samples to fill a jar.

For drums containing solid or granular waste materials, a Trier or elongated scoop (SW- 846) will be inserted in the drum or barrel to remove a “core” of waste. The sample procedures for selecting the number of drums to be sampled, and amount of sample to be collected, are the same as procedures followed for liquid drum samples.

#### Tanks

Liquid samples associated with the storage tanks, including offsite shipments of materials from the storage tanks, is performed using a sample tap on the piping associated with the tanks. The sample tap is flushed with, at a minimum, the volume of the tap prior to collection of the sample.

#### General

Prevention of cross contamination of waste samples is critical to the quality of the analytical results. Whenever possible, disposable (which is disposed of after each use) or dedicated sampling equipment (which remains at the same sampling location) is used to eliminate the possibility of cross contamination. When appropriate, certified clean containers will be used to collect samples. However, when it is impractical to use disposable sampling equipment, sampling equipment is decontaminated between collections of individual sampling events using a combination of industrial detergent, solvent, and/or distilled water.

## 5.2 Sample Preservation

Samples will be stored pursuant to the appropriate SW-846 procedures or specific procedures outlined in the analytical method. All samples will be analyzed within the time frame specified by the designated method.

## 5.3 Chain-of-Custody and Sample Labeling

All hazardous waste samples collected will be labeled and accompanied by a chain-of-custody form. The label will state the sampler's name, date, sample number, and location and will be permanently attached to the sample container. The sample label will also specify the parameters to be analyzed and the hazards associated with the sample, where appropriate. The chain-of-custody will document sample possession from the time of collection to time of delivery of the samples to the transporter and from transporter delivery to the laboratory through final analyses. The receiving laboratory will verify that the sample transported by the transporter have not been damaged, broken, or tampered with (i.e., missing seals).

## 5.4 Sample Quality Assurance

The quality of the sampling program has a direct bearing on how representative the samples are of the waste stream. In order to ensure sampling integrity, the sampling procedures just outlined will be strictly followed. These procedures include sample collection, sample preservation, and chain-of-custody. The sampling operations will be supervised by a person thoroughly familiar with both the sampling and analytical techniques. Special precautions will be followed:

1. When selecting the appropriate sampling device;
2. To prevent cross-contamination of samples; and
3. When using non-routine sampling procedures.

**Attachment V.**

**Engineering Reports**

**Table V.A. – Facility Waste Management Handling Units**

| TCEQ Permit Unit No. <sup>1</sup> | Unit Name                           | NOR No. <sup>1</sup> | Unit Description <sup>3</sup>                                                                                                                             | Capacity              | Unit Status <sup>2</sup> |
|-----------------------------------|-------------------------------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------|
| 1                                 | CCIN-1                              | 065                  | Halogen acid furnace, horizontal flow, liquid hazardous waste industrial furnace consisting of a firebox (combustion zone) and waste heat boiler.         | 5,500 lb/hr           | Active                   |
| 2                                 | CCIN-2                              | 066                  | Halogen acid furnace, horizontal flow, liquid hazardous waste industrial furnace consisting of a firebox (combustion zone) and waste heat boiler.         | 5,500 lb/hr           | Active                   |
| 3                                 | WW Sludge Container Storage Area    | 048                  | Container storage area, <u>60-ft by 60-ft area with no secondary containment</u>                                                                          | <u>32,318 gallons</u> | Closed                   |
| 4                                 | Chlor-Alkali Container Storage Area | 006                  | Container storage area, 63-ft by 18-ft paved and curbed foundation covered by roof and surrounded by 3 walls, designed to store 80 55-gallon containers.  | 4,400 gallons         | Closed                   |
| 5                                 | VCM Container Storage Area          | 022                  | Container storage area, 41-ft by 21-ft paved and curbed foundation covered by roof and surrounded by 4 walls, designed to store 168 55-gallon containers. | 9,240 gallons         | Active                   |
| 6                                 | C-720A                              | 023                  | Tank, elevated steel sphere, diameter of 26-feet, feed tank for the halogen acid furnaces.                                                                | 65,000 gallons        | Active                   |
| 7                                 | C-720B                              | 082                  | Tank, elevated steel sphere, diameter of 26-feet, feed tank for the halogen acid furnaces.                                                                | 65,000 gallons        | Active                   |
| 8                                 | 6D-02                               | 081                  | Tank                                                                                                                                                      | <u>37,700 gallons</u> | Closed                   |

1. Permitted Unit No. and NOR No. cannot be reassigned to new units or used more than once and all units that were in the Attachment D of a previously issued permit must be listed.

2. Unit Status Options: Active, Closed, Inactive (built but not managing waste), Proposed (not yet built), Never Built, Transferred, Post-Closure.

3. If a unit has been transferred, the applicant should indicate which facility/permit it has been transferred to in the Unit Description column of Table V.A.



# **Attachment V.A**

## **General Information Report**

## **Attachment V.A**

### **General Information Report**

**OxyChem**  
**Ingleside, Texas**



ATLAS TECHNICAL CONSULTANTS LLC  
15740 Park Row Drive, Suite 200  
Houston, TX 77084  
TBPE Firm Registration No. - F-19813

# **Attachment V.A**

## **General Information Report**

**OxyChem**  
**Ingleside, Texas**

## Figures

|          |                                 |
|----------|---------------------------------|
| Figure 1 | USGS Map                        |
| Figure 2 | Wind Rose – 2020-2024           |
| Figure 3 | Fences and Gates                |
| Figure 4 | Sole Source Aquifers of Texas   |
| Figure 5 | Major Aquifers of Texas         |
| Figure 6 | Faults of Texas                 |
| Figure 7 | Faults in Proximity to Facility |

## Appendices

|                   |                                |
|-------------------|--------------------------------|
| Appendix A        | Water Well Report              |
| Appendix B        | Soil Report                    |
| Appendix C        | Flood Maps                     |
| <u>Appendix D</u> | <u>NOAA Precipitation Data</u> |



## 1.0 Introduction

OxyChem owns and operates a chemical plant near Ingleside in San Patricio County, Texas. The OxyChem facility produces ethylene dichloride (EDC), vinyl chloride monomer (VCM), chlorine, and caustic soda. In addition to the production processes, OxyChem owns and operates hazardous waste management units subject to RCRA permitting requirements. As such, the facility stores hazardous wastes for subsequent treatment onsite via combustion and for shipment offsite for treatment and disposal. Figure 1 presents an overall plan view of the facility and identifies the locations of the hazardous waste management units.

As shown in Figure 1, the hazardous waste storage tanks (Tanks C-720A and C-720B) and hazardous waste ~~Halogen Acid Cl-production-f~~Furnaces (~~HAFs~~) (~~Incinerators~~ CCIN-1 and CCIN-2) are located approximately 2,000 feet from the nearest boundary and approximately 2,500 feet from the nearest public roadway (State Highway 361). In addition, the VCM container storage area is located over 500 feet from the nearest property boundary and over 2,000 feet from State Highway 361. In addition, incompatible wastes are not stored in the VCM container storage area. Therefore, the facility has provided adequate buffer zones and segregation for the hazardous waste streams managed at the facility.

This report provides general information regarding the location of the facility and preparedness and prevention as it relates to permitted hazardous waste management units to address the following general facility requirements:

- General requirements for ignitable, reactive, or incompatible waste per 40 CFR 264.17;
- Location standards of 40 CFR 264.18 and 30 TAC 335.204;
- Preparedness and prevention requirements of 40 CFR Part 264, Subpart C with the exception of 264.37, which is addressed in the Contingency Plan; and
- Section I.E of the TCEQ Part B Application Form.

## 2.0 Facility Location

The OxyChem facility is situated in San Patricio County in Ingleside, Texas. The facility is located between Corpus Christi Bay and State Highway 361 at a location approximately three miles southeast of Gregory, Texas. Adjacent land use consists primarily of industrial and undeveloped.

Several figures are presented in order to meet the information requirements specified in 40 CFR 270.14(b)(19), 270.14(c)(3), and 270.14(d)(1)(i). Figure 1 includes the following information:

- Map scale and date;
- Surface waters, including intermittent streams;
- Surrounding land uses (residential, commercial, agricultural, recreational);
- Orientation of the map (north arrow);
- Legal boundaries of the HWM facility site;
- Buildings, TSD operations, and other structures;
- Barriers for drainage of flood control; and
- Operational units within the HWM facility site where hazardous waste is treated, stored, or disposed.

In addition to Figure 1, the following items are also included in this report:

- Figure 2 - Wind rose map for 2020 through 2024;
- Figure 3 - Facility fences and gates;
- Figure 4 - Sole source aquifers of Texas;
- Figure 5 – Major Aquifers of Texas;
- Figure 6 – Faults of Texas;
- Figure 7 – Faults in proximity to the facility;
- Appendix A - Water well report;
- Appendix B – Soil report; ~~and~~
- Appendix C – Flood maps; and
- Appendix D – NOAA Precipitation Data.

The following sections address the unsuitable site characteristics specified in 30 TAC 335.204. Unsuitable site characteristics include the following:

- Located in wetlands;
- Located in critical habitat of an endangered species;

- Located in the recharge zone of a sole-source aquifer;
- Located in an area overlying a regional aquifer;
- Located in areas with certain soil types;
- Located in an area of direct drainage within one-mile of a lake used for public drinking water;
- Located in an area of active geologic processes;
- Located near a geologic fault; and
- Located in a 100-year floodplain.

## **2.1 Wetlands**

Pursuant to 30 TAC 335.204(a)(2), storage or processing facilities may not be located in areas with wetlands. There are no wetlands at the OxyChem facility. The facility is situated within an industrial property in Ingleside, Texas. As evident from the USGS Map (Figure 1), facility areas are relatively flat, with no significant water storage features and/or vegetative cover. The areas are developed (i.e., paved and equipped with structures/equipment) and no natural water features are present at the facility.

## **2.2 Critical Habitat**

Pursuant to 30 TAC 335.204(a)(8), storage or processing facilities may not be located in the critical habitat of an endangered species of plant or animal unless the design, construction, and operational features of the facility will prevent adverse effects on the critical habitat of the endangered species. OxyChem is not aware of any critical habitat of an endangered species of plant or animal within the property boundaries. Therefore, no critical habitats have been identified at the facility.

## **2.3 Sole Source Aquifer**

Pursuant to 30 TAC 335.204(a)(3), storage or processing facilities may not be located on the recharge zone of a sole-source aquifer unless secondary containment is provided to preclude migration to groundwater from spills, leaks, or discharges. The U.S. Environmental Protection Agency has designated the Edwards Aquifer as the only sole source aquifer in the State of Texas. As shown in Figure 4, the Edwards Aquifer is located in Central Texas from Austin to San Antonio and westward. Therefore, the OxyChem facility is not located in the recharge zone of a sole source aquifer.

prevent hazards during loading/unloading operations. Storage tanks are equipped with hard piping between tanks such that unloading operations are not typically required. In some instances (e.g., tanker truck loading/unloading, etc.), flexible hosing may be used to facilitate transfer into or between storage tanks. In these instances, transfers will be done with high-strength, chemical hoses equipped with locking connections to minimize hazards during the loading/unloading process. Further, operators will be present and supervising waste transfers between tanks and trucks during loading/unloading operations with flexible hoses.

### **3.4 Prevention of Runoff**

Hazardous waste management units are designed to prevent runoff to other areas of the facility and the environment. This is accomplished by the use of paving, curbs, and trenches to manage any stormwater in the unit area and/or releases that may occur from equipment failure. Acceptable stormwater is routed to the wastewater treatment system.

### **3.5 Preventing Contamination of Water Supplies**

Water supply facilities are not located in close proximity to hazardous waste management units at the facility. As referenced in Section 3.4, units are surrounded by paving, curbing, and trenches to prevent runoff or soil penetration.

### **3.6 Equipment Failure and/or Power Outages**

No special procedures, structures, or equipment specific to RCRA units are used to mitigate the effects of equipment failure or power outages. In the event of a power outage or equipment failure, the flow of hazardous waste to and from storage tanks would be cut off. The HAFs ~~incinerators~~ are equipped with fail-close valves such that when a power failure occurs the waste feed is automatically stopped.

### **3.7 Undue Exposure of Personnel**

On-site personnel working in hazardous waste management areas will have a high degree of knowledge regarding hazards posed by the waste and precautions necessary to prevent exposure to the waste. Through a combination of design features, personnel training, and operational practices, exposure to hazardous waste will be minimized. Wastes managed in tanks are hard piped from unloading processes to the tank. With the exception of maintenance activities and sample collection, personnel are not typically exposed to the hazardous waste.



Personnel working at hazardous waste management units have direct access to safety equipment, which includes personal protective equipment (PPE) (e.g., fire retardant clothing, rubber gloves, safety glasses with side shields, steel-toe shoes, hard hat, etc.). If workers detect a release of hazardous waste or are performing activities where exposure could occur (e.g., maintenance, sampling, etc.), they will gauge the extent of potential exposure and determine the level of PPE needed. As necessary, workers will solicit input from environmental, health, and/or safety personnel to determine the level of PPE required to prevent undue exposure.

### **3.8 Prevent Releases to the Atmosphere**

Hazardous waste managed at the facility will first be stored prior to subsequent management. Storage is in tanks and/or containers. Storage tanks receive wastes from onsite and offsite sources and may then pump waste to onsite ~~HAFs incinerators~~ via hard piping; thereby minimizing the potential for releases into the atmosphere. In addition to management practices discussed above, the facility performs routine monitoring of equipment in hazardous waste service, which is subject to 40 CFR Part 264, Subpart BB regulations, to detect fugitive emissions from associated equipment (e.g., valves, pump seals, agitator seals, flanges, connectors, etc.). Facility operators also perform routine visual inspections to verify that potential leaks are detected quickly and repaired. Additional information regarding air emissions is provided in Attachment X.

For hazardous waste stored in containers, OxyChem keeps containers closed except when adding or removing waste. In addition, for containers greater than 26 gallons with a volatile organics concentration of 500 ppmw or greater, the facility complies with the requirements of 40 CFR Part 264, Subpart CC to minimize releases to the atmosphere.

### **3.9 Prevention of Ignition, Reaction, and Incompatibility**

Wastes managed in tanks are compatible with other materials managed in related tanks. Some wastes managed at the facility may be reactive, and those wastes are managed in containers. Procedures for management of those wastes for specific hazardous waste management units is provided in Attachments V.B.1, V.C.1, V.C.2, V.I.1, and V.I.2 of this application.

Waste streams managed at the facility may demonstrate the characteristic of ignitability (D001). In addition to the procedures specified in the prior sections, the following are used to prevent ignition of ignitable waste streams:

## 5.0 Maps, Figures, and Drawings

Several maps and drawings have been included in this application to reflect details of the OxyChem facility as well as pertinent features of surrounding areas that are within 1,000 feet (and in some cases more) from the facility boundary. The following are the maps, figures, and drawings showing general features of the site and their location within the application:

- USGS Map (facility plot plan) - provided as Figure 1 and included as Attachment C to the Part A Application Form;
- Wind Rose – presented as Figure 2;
- Fences and Gates - presented as Figure 3;
- Sole Source Aquifers in Texas - presented as Figure 4;
- Major Aquifers of Texas - presented as Figure 5;
- Faults of Texas - presented as Figure 6;
- Faults in Proximity to Facility - presented as Figure 7;
- Water Well Report – included as Appendix A;
- Soil Report - included as Appendix B;~~and~~
- Flood Maps – included as Appendix C; and
- NOAA Precipitation Data – included as Appendix D.

The above maps and drawings included in this application clearly indicate the following:

- Map Scale and Date - Maps, figures, and drawings are shown at the scale noted on the maps and drawing. Dates of the maps and drawings are also shown.

- 100-Year Floodplain Area - FEMA Flood Insurance Rate Maps for the facility area are provided in Appendix C of this General Information Report.
- Surface Waters - Surface waters on and near facility property are shown on the USGS Map (Figure 1). There are no significant surface waters on or adjacent to the facility. Corpus Christi Bay, which forms the southwestern boundary of the facility, is the nearest significant surface water feature in the area.
- Surrounding Land Uses - Surrounding land uses are shown in Figure 1. Adjacent land use consists primarily of industrial and undeveloped property. The closest residential areas to the property are approximately one mile east of the facility in the town of Ingleside.
- Wind Rose - Wind rose information was obtained from the Iowa Environmental Mesonet website maintained by Iowa State University. Data was obtained for the Corpus Christi International Airport in Corpus Christi, Texas, which is approximately 18 miles southwest of the facility and is the closest observation point. A copy of this wind rose for the period 2020 through 2024 is provided as Figure 2.
- Orientation of the Map - Maps contain north arrows.
- Legal Boundaries of the Facility - The facility legal description is provided as Attachment B of the Part A Application Form. Legal boundaries are also indicated on the USGS Map provided as Figure 1.
- Access Control - Security fencing and gates enclose the property as reflected on Figure 3.
- Injection and Withdrawal Wells - There are no active injection or withdrawal wells associated with the facility. Locations of water wells and supporting information is provided in Appendix A.
- Buildings - The container storage areas, administration buildings, and control buildings are reflected on Figure 1, which are the primary facility buildings.

- Barriers for Drainage and Flood Control - There are no flood control barriers (e.g., levees) at the facility. Drainage control barriers consist of curbing, open flumes, ditches, and dikes where applicable, and they are reflected on the drawings.
- Location of Operational Units - Hazardous waste management units subject to permitting are shown on Figure 1.

## 6.0 Flood Plain Information

Appendix C (Flood Maps) includes regional floodplain maps of the area of San Patricio County where the OxyChem facility is located as well as properties immediately surrounding the site. Appendix C indicates that the majority of the facility lies completely in Zone X. According to the legend in Appendix C, Zone X is designated as being outside the 100-year floodplain area. The southern portion of the facility along the La Quinta Channel of Corpus Christi Bay is represented as being in Zone AE, which denotes areas of minimal flooding.

Since the portions of the facility that contain the hazardous waste management units are not located in the 100-year floodplain, the following supplemental information is not included in the application:

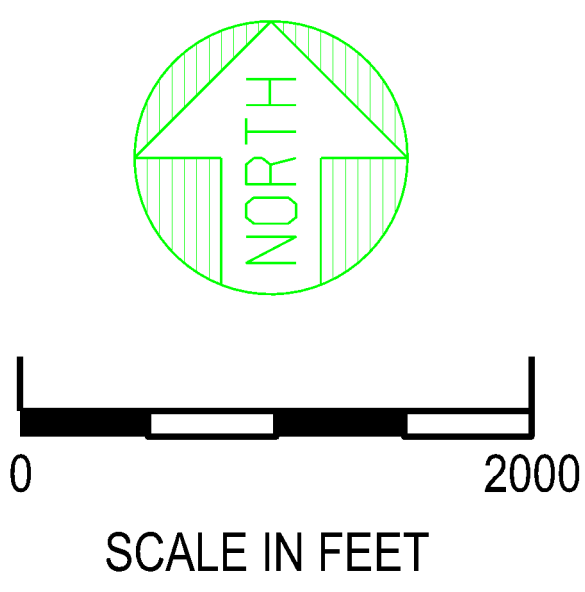
- Specific flooding levels, other events (e.g., design floods, hurricanes, etc.), and flooding factors (e.g., wave actions) that the considerations to design/operating effectiveness must be identified;
- Evaluation of flood protection devices; and/or
- Contingent waste removal procedures if flood protection is not provided.

The National Oceanic and Atmospheric Administration (NOAA) precipitation data for Portland, Texas is presented in Appendix D. The presented information indicates that the 25-year, 24-hour rainfall event for the facility is 10.1 inches.





MAP SOURCE: USGS 7.5 MIN. QUAD SHEETS ARANSAS PASS, TX., 2022; GREGORY, TX, 2022, PORT OF INGLESIDE, TX, 2022, PORTLAND, TX, 2022



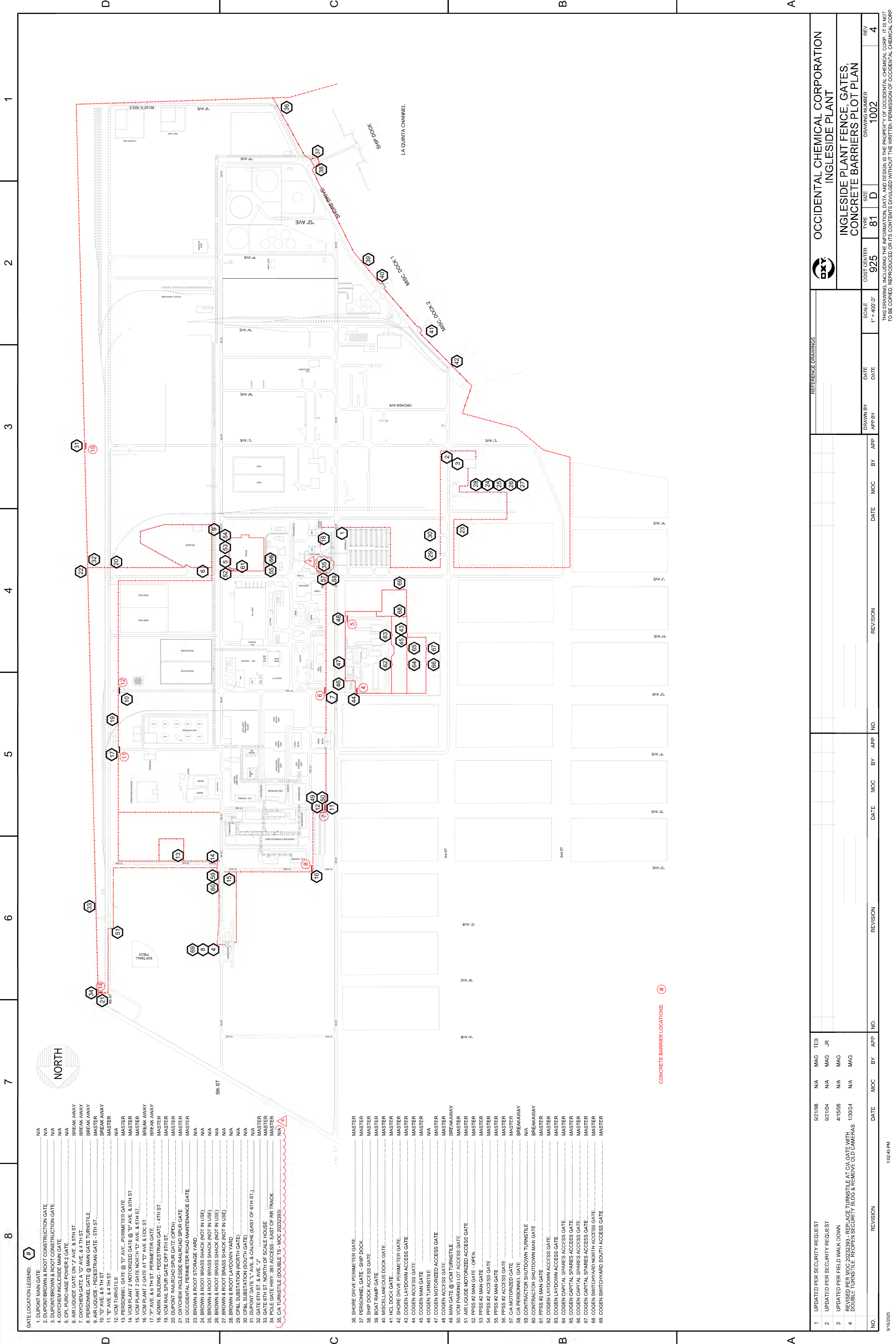
- FACILITY BOUNDARY
- ONE MILE RADIUS
- OUTFALL LOCATION
- MONITORING WELL LOCATION AND IDENTIFICATION NUMBER

OXYCHEM

DATE: 06/17/2025 FILE: ATT-C-USGSMAP.DGN

ATTACHMENT C  
USGS MAP





| REFERENCE DRAWINGS |  |  |  | OCCIDENTAL CHEMICAL CORPORATION<br>INGLESIDE PLANT           |  |  |  |
|--------------------|--|--|--|--------------------------------------------------------------|--|--|--|
| DRAWN BY<br>APP BY |  |  |  | INGLESIDE PLANT FENCE, GATES,<br>CONCRETE BARRIERS PLOT PLAN |  |  |  |
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## **Appendix D**

### **NOAA Precipitation Data**



NOAA Atlas 14, Volume 11, Version 2  
 Location name: Portland, Texas, USA\*  
 Latitude: 27.8808°, Longitude: -97.2442°  
 Elevation: 21 ft\*\*  
 \* source: ESRI Maps  
 \*\* source: USGS



### POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sandra Pavlovic, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Orlan Wilhite

NOAA, National Weather Service, Silver Spring, Maryland

[PF tabular](#) | [PF graphical](#) | [Maps & aeriels](#)

### PF tabular

| PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) <sup>1</sup> |                                     |                        |                        |                       |                       |                      |                      |                      |                     |                     |
|----------------------------------------------------------------------------------------------------------|-------------------------------------|------------------------|------------------------|-----------------------|-----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|
| Duration                                                                                                 | Average recurrence interval (years) |                        |                        |                       |                       |                      |                      |                      |                     |                     |
|                                                                                                          | 1                                   | 2                      | 5                      | 10                    | 25                    | 50                   | 100                  | 200                  | 500                 | 1000                |
| 5-min                                                                                                    | 0.490<br>(0.371-0.648)              | 0.575<br>(0.438-0.750) | 0.710<br>(0.541-0.933) | 0.825<br>(0.619-1.10) | 0.984<br>(0.716-1.35) | 1.11<br>(0.785-1.56) | 1.24<br>(0.852-1.79) | 1.37<br>(0.919-2.04) | 1.55<br>(1.00-2.38) | 1.68<br>(1.07-2.66) |
| 10-min                                                                                                   | 0.777<br>(0.588-1.03)               | 0.912<br>(0.695-1.19)  | 1.13<br>(0.860-1.48)   | 1.31<br>(0.985-1.75)  | 1.57<br>(1.14-2.16)   | 1.77<br>(1.26-2.50)  | 1.97<br>(1.36-2.86)  | 2.18<br>(1.46-3.24)  | 2.44<br>(1.59-3.76) | 2.64<br>(1.67-4.18) |
| 15-min                                                                                                   | 0.988<br>(0.748-1.30)               | 1.16<br>(0.882-1.51)   | 1.43<br>(1.09-1.87)    | 1.65<br>(1.24-2.20)   | 1.97<br>(1.43-2.70)   | 2.21<br>(1.57-3.12)  | 2.46<br>(1.70-3.57)  | 2.72<br>(1.83-4.05)  | 3.07<br>(2.00-4.73) | 3.34<br>(2.12-5.28) |
| 30-min                                                                                                   | 1.42<br>(1.07-1.87)                 | 1.65<br>(1.26-2.15)    | 2.02<br>(1.54-2.66)    | 2.34<br>(1.76-3.12)   | 2.78<br>(2.02-3.81)   | 3.11<br>(2.20-4.39)  | 3.46<br>(2.38-5.01)  | 3.83<br>(2.57-5.70)  | 4.34<br>(2.82-6.69) | 4.74<br>(3.00-7.50) |
| 60-min                                                                                                   | 1.86<br>(1.41-2.46)                 | 2.18<br>(1.66-2.84)    | 2.70<br>(2.05-3.54)    | 3.13<br>(2.35-4.17)   | 3.73<br>(2.71-5.12)   | 4.20<br>(2.97-5.92)  | 4.68<br>(3.23-6.79)  | 5.22<br>(3.51-7.78)  | 5.98<br>(3.89-9.22) | 6.60<br>(4.18-10.4) |
| 2-hr                                                                                                     | 2.26<br>(1.72-2.97)                 | 2.72<br>(2.08-3.50)    | 3.44<br>(2.63-4.48)    | 4.05<br>(3.06-5.37)   | 4.94<br>(3.61-6.73)   | 5.64<br>(4.01-7.90)  | 6.39<br>(4.43-9.20)  | 7.24<br>(4.88-10.7)  | 8.46<br>(5.51-12.9) | 9.46<br>(6.01-14.8) |
| 3-hr                                                                                                     | 2.49<br>(1.90-3.26)                 | 3.04<br>(2.32-3.89)    | 3.90<br>(2.99-5.05)    | 4.65<br>(3.52-6.13)   | 5.74<br>(4.21-7.80)   | 6.62<br>(4.73-9.25)  | 7.59<br>(5.27-10.9)  | 8.68<br>(5.87-12.8)  | 10.3<br>(6.70-15.6) | 11.6<br>(7.36-18.0) |
| 6-hr                                                                                                     | 2.87<br>(2.20-3.73)                 | 3.60<br>(2.74-4.53)    | 4.70<br>(3.62-6.05)    | 5.69<br>(4.34-7.46)   | 7.15<br>(5.28-9.67)   | 8.36<br>(6.00-11.6)  | 9.70<br>(6.77-13.8)  | 11.2<br>(7.62-16.4)  | 13.5<br>(8.83-20.3) | 15.3<br>(9.80-23.7) |
| 12-hr                                                                                                    | 3.23<br>(2.50-4.18)                 | 4.15<br>(3.17-5.16)    | 5.51<br>(4.27-7.04)    | 6.75<br>(5.17-8.80)   | 8.60<br>(6.38-11.5)   | 10.1<br>(7.31-14.0)  | 11.9<br>(8.32-16.7)  | 13.9<br>(9.45-20.0)  | 16.9<br>(11.1-25.2) | 19.4<br>(12.4-29.7) |
| 24-hr                                                                                                    | 3.60<br>(2.80-4.62)                 | 4.70<br>(3.61-5.81)    | 6.35<br>(4.94-8.06)    | 7.85<br>(6.05-10.2)   | 10.1<br>(7.52-13.4)   | 11.9<br>(8.66-16.4)  | 14.0<br>(9.90-19.7)  | 16.5<br>(11.3-23.6)  | 20.2<br>(13.3-29.9) | 23.3<br>(15.0-35.3) |
| 2-day                                                                                                    | 3.93<br>(3.08-5.02)                 | 5.25<br>(4.07-6.45)    | 7.22<br>(5.67-9.11)    | 9.00<br>(6.98-11.6)   | 11.6<br>(8.70-15.4)   | 13.8<br>(10.0-18.7)  | 16.2<br>(11.4-22.5)  | 18.9<br>(13.0-26.9)  | 23.0<br>(15.2-33.8) | 26.4<br>(17.1-39.6) |
| 3-day                                                                                                    | 4.26<br>(3.35-5.42)                 | 5.66<br>(4.40-6.93)    | 7.75<br>(6.10-9.74)    | 9.65<br>(7.50-12.4)   | 12.4<br>(9.37-16.4)   | 14.8<br>(10.8-20.0)  | 17.3<br>(12.3-24.0)  | 20.2<br>(13.9-28.6)  | 24.4<br>(16.2-35.7) | 27.9<br>(18.0-41.6) |
| 4-day                                                                                                    | 4.55<br>(3.58-5.77)                 | 6.00<br>(4.68-7.35)    | 8.19<br>(6.47-10.3)    | 10.2<br>(7.92-13.0)   | 13.1<br>(9.85-17.2)   | 15.4<br>(11.3-20.8)  | 18.1<br>(12.8-24.9)  | 21.0<br>(14.5-29.6)  | 25.2<br>(16.8-36.7) | 28.7<br>(18.6-42.7) |
| 7-day                                                                                                    | 5.29<br>(4.19-6.68)                 | 6.82<br>(5.38-8.37)    | 9.16<br>(7.28-11.5)    | 11.2<br>(8.81-14.3)   | 14.3<br>(10.8-18.7)   | 16.7<br>(12.3-22.4)  | 19.4<br>(13.8-26.6)  | 22.3<br>(15.5-31.3)  | 26.5<br>(17.7-38.3) | 29.9<br>(19.5-44.2) |
| 10-day                                                                                                   | 5.89<br>(4.67-7.41)                 | 7.48<br>(5.94-9.19)    | 9.95<br>(7.93-12.4)    | 12.1<br>(9.52-15.4)   | 15.2<br>(11.6-19.8)   | 17.7<br>(13.1-23.7)  | 20.4<br>(14.6-27.9)  | 23.4<br>(16.2-32.6)  | 27.5<br>(18.4-39.6) | 30.9<br>(20.1-45.4) |
| 20-day                                                                                                   | 7.46<br>(5.96-9.33)                 | 9.25<br>(7.48-11.5)    | 12.2<br>(9.82-15.2)    | 14.6<br>(11.6-18.4)   | 18.0<br>(13.7-23.2)   | 20.5<br>(15.1-27.1)  | 23.1<br>(16.6-31.3)  | 26.0<br>(18.2-36.0)  | 30.1<br>(20.3-42.9) | 33.4<br>(21.8-48.6) |
| 30-day                                                                                                   | 8.70<br>(6.98-10.8)                 | 10.7<br>(8.71-13.3)    | 14.0<br>(11.3-17.4)    | 16.6<br>(13.2-20.9)   | 20.2<br>(15.4-25.9)   | 22.8<br>(16.9-29.9)  | 25.4<br>(18.3-34.2)  | 28.3<br>(19.8-39.0)  | 32.3<br>(21.8-45.9) | 35.5<br>(23.3-51.4) |
| 45-day                                                                                                   | 10.4<br>(8.39-12.9)                 | 12.6<br>(10.3-15.6)    | 16.3<br>(13.3-20.2)    | 19.3<br>(15.4-24.2)   | 23.3<br>(17.8-29.8)   | 26.2<br>(19.5-34.3)  | 29.2<br>(21.1-39.1)  | 32.2<br>(22.6-44.2)  | 36.3<br>(24.6-51.2) | 39.5<br>(25.9-56.9) |
| 60-day                                                                                                   | 11.9<br>(9.63-14.8)                 | 14.3<br>(11.7-17.7)    | 18.4<br>(14.9-22.7)    | 21.6<br>(17.3-27.0)   | 26.1<br>(20.0-33.3)   | 29.4<br>(22.0-38.4)  | 32.7<br>(23.7-43.7)  | 36.0<br>(25.3-49.1)  | 40.2<br>(27.2-56.4) | 43.4<br>(28.5-62.2) |

<sup>1</sup> Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

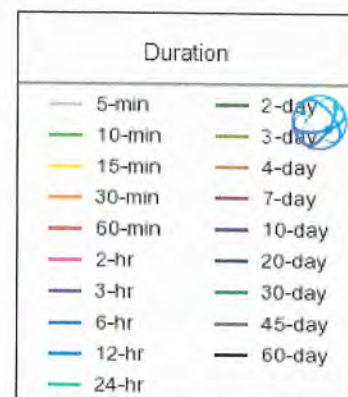
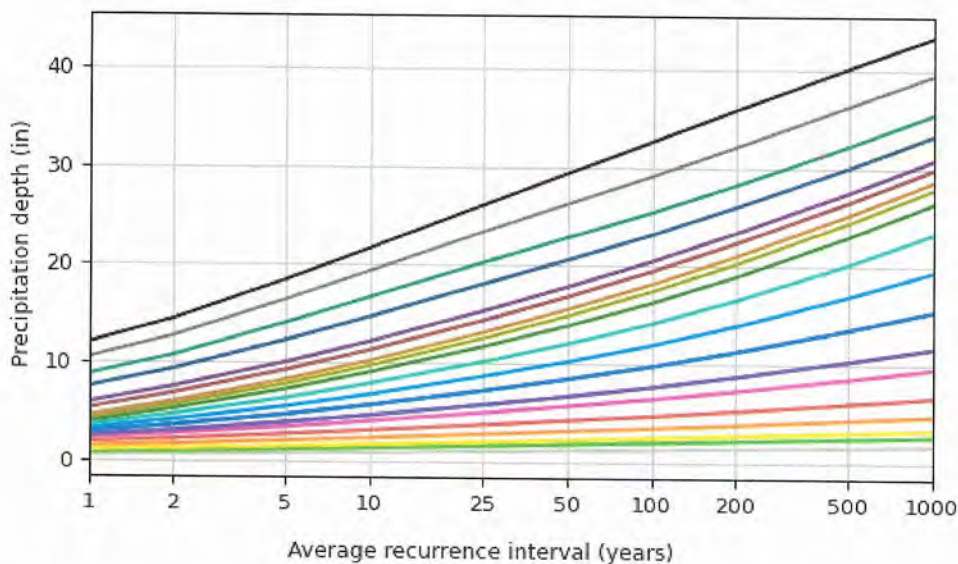
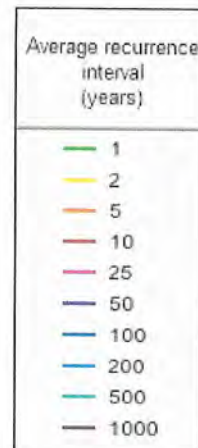
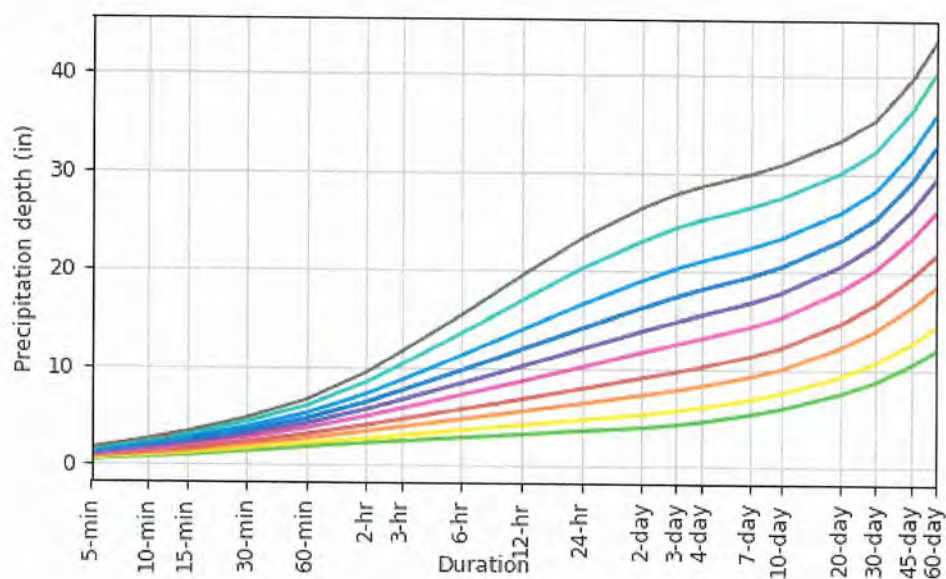
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### PF graphical



## PDS-based depth-duration-frequency (DDF) curves

Latitude: 27.8808°, Longitude: -97.2442°



NOAA Atlas 14, Volume 11, Version 2

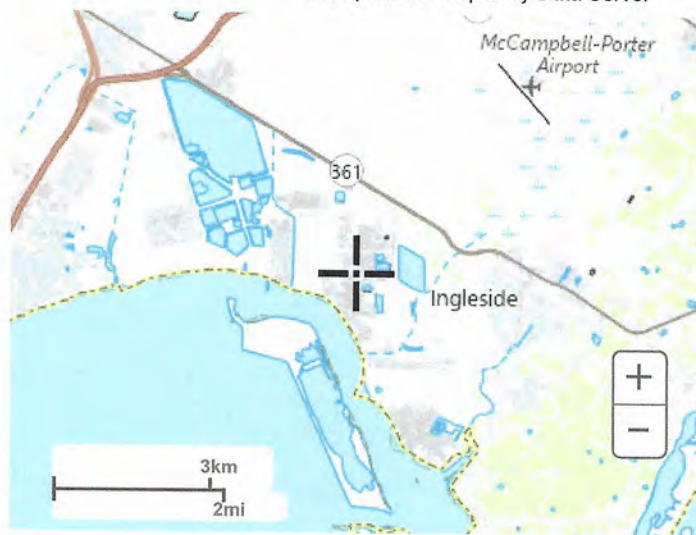
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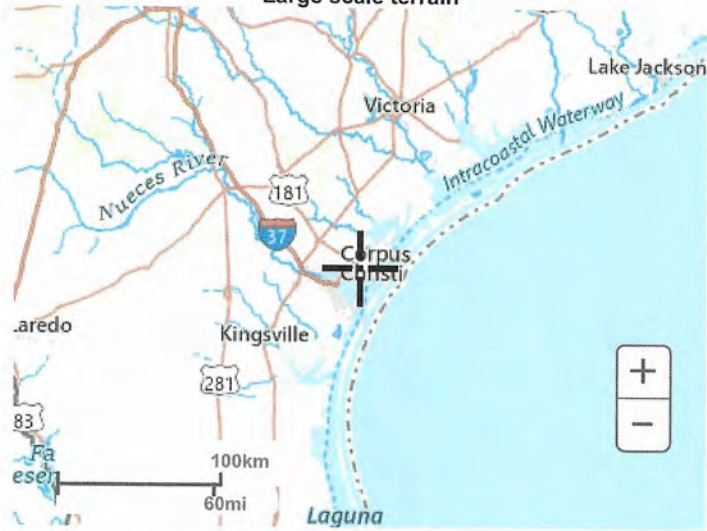
## Maps &amp; aeriels

Small scale terrain





Large scale terrain



Large scale map



Large scale aerial





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## **Attachment V.B**

### **VCM Container Storage Area**



Table V.B. - Container Storage Area

| Permit Unit No. | Container Storage Area | N.O.R. No. | Waste Nos. <sup>4</sup> | Rated Capacity <sup>3</sup> | Dimensions | Containment Volume (including rainfall for unenclosed areas) | Unit will manage Ignitable <sup>1</sup> , Reactive <sup>1</sup> , or Incompatible <sup>2</sup> waste (state all that apply) | Unit Status |
|-----------------|------------------------|------------|-------------------------|-----------------------------|------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------|
| 5               | VCM                    | 022        | All                     | 9,240 gal.                  | 41' x 21'  | 4,438 gallons                                                | Ignitable and Reactive                                                                                                      | Active      |
|                 |                        |            |                         |                             |            |                                                              |                                                                                                                             |             |
|                 |                        |            |                         |                             |            |                                                              |                                                                                                                             |             |
|                 |                        |            |                         |                             |            |                                                              |                                                                                                                             |             |
|                 |                        |            |                         |                             |            |                                                              |                                                                                                                             |             |
|                 |                        |            |                         |                             |            |                                                              |                                                                                                                             |             |
|                 |                        |            |                         |                             |            |                                                              |                                                                                                                             |             |
|                 |                        |            |                         |                             |            |                                                              |                                                                                                                             |             |
|                 |                        |            |                         |                             |            |                                                              |                                                                                                                             |             |
|                 |                        |            |                         |                             |            |                                                              |                                                                                                                             |             |
|                 |                        |            |                         |                             |            |                                                              |                                                                                                                             |             |
|                 |                        |            |                         |                             |            |                                                              |                                                                                                                             |             |

1. Containers managing ignitable or reactive waste must be located at least 15 meters (50 feet) from the facility's property line.
2. Incompatible waste must be separated from other waste or materials stored nearby in other containers, piles, open tanks, or surface impoundments by means of a dike, berm, wall, or other device.
3. Container Storage Areas need to include in capacity calculations any nonhazardous wastes and universal wastes managed in the unit in addition to hazardous wastes.
4. from Table IV.B, first column

## **Attachment V.B.1**

### **VCM Container Storage Area Report**

**OxyChem**  
**Ingleside, Texas**



ATLAS TECHNICAL CONSULTANTS LLC  
15740 Park Row Drive, Suite 200  
Houston, TX 77084  
TBPE Firm Registration No. - F-19813

# **Attachment V.B.1**

## **VCM Container Storage Area Report**

**OxyChem**  
**Ingleside, Texas**



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## Appendices

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| Appendix C | <del>Secondary Containment Volume Calculation</del><br><del>Closure Plan and Cost Estimate</del> |

### 3.0 Unit Details

With dimensions of 41 feet by 21 feet and 8-inch curbing, the VCM Container Storage Area has approximately 860 square feet of curbed and covered floor space and has a secondary containment volume of 4,438 560-gallons (see calculation in Appendix C). The roof structure is built of typical pre-engineered metal construction.

Design information for the VCM Container Storage Area is provided as Appendix B. The following provide design and construction specifications for the unit:

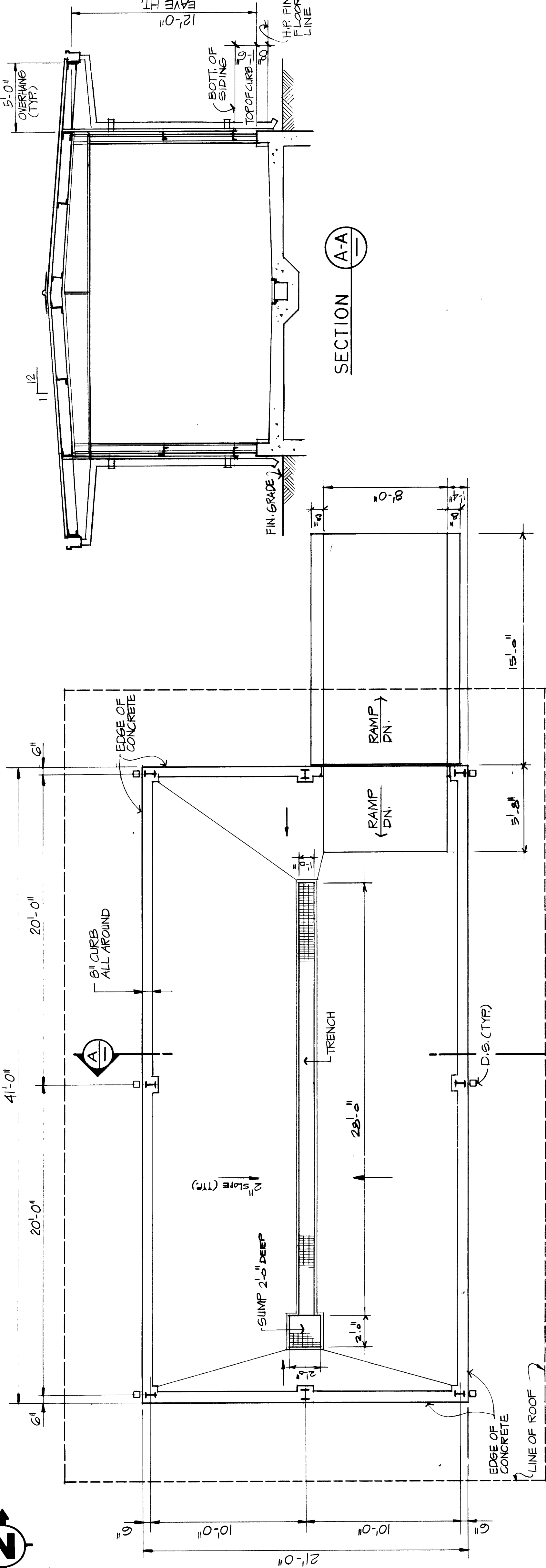
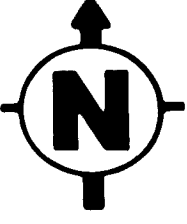
- The foundation for the unit is constructed of 8-inch thick reinforced concrete. The foundation is a floating slab design and serves as the floor of the storage area as well.
- The floor of the unit include an integral 8-inch tall peripheral curb to provide containment if releases from stored containers occurs.
- The unit is enclosed on three sides, so significant precipitation accumulation does not occur. Also, containers are typically placed on pallets to elevate the bottom of the container off the secondary containment surface.
- The VCM Container Storage Area is designed to store a maximum of 9,240 gallons of waste in containers. The quantity and type of waste will vary dependent on generating conditions.
- The minimum required secondary containment volume is 10% of the maximum storage capacity or the volume of the largest container, whichever is greater (40 CFR 264.175(b)(3)). The minimum required secondary containment volume is 924 gallons. The secondary containment volume is calculated in Appendix C to be 4,438 gallons. Therefore, the minimum required secondary containment volume is provided.
- Rainfall run-on into the VCM Container Storage Area is minimized by the roof and perimeter curbing.

## 4.0 Closure

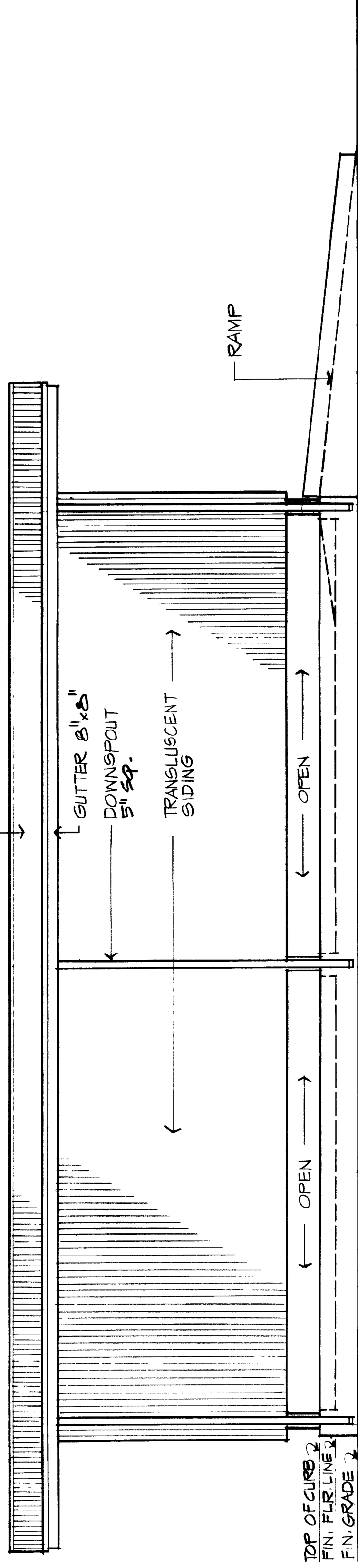
A closure plan, which describes the procedures that will be implemented for closure of the VCM Container Storage Area is provided in Attachment VII.A.1 as Appendix C. Closure cost estimates are also provided as part of the closure plan. ~~It should be noted that the closure cost estimates were previously developed in prior permit applications (and subsequently approved by TCEQ) using conservative costing assumptions (e.g., inoperable facility equipment, third party closure, etc.) that may differ from the procedures specified in the closure plan. At closure, OxyChem intends to use facility personnel to perform closure activities with supervision provided by an independent, licensed professional engineer. It should also be noted that these closure cost estimates were developed using an overly conservative assumption, which was that contaminated soils would be present. That assumption has not been carried over to the closure cost tables in the Part B application form.~~



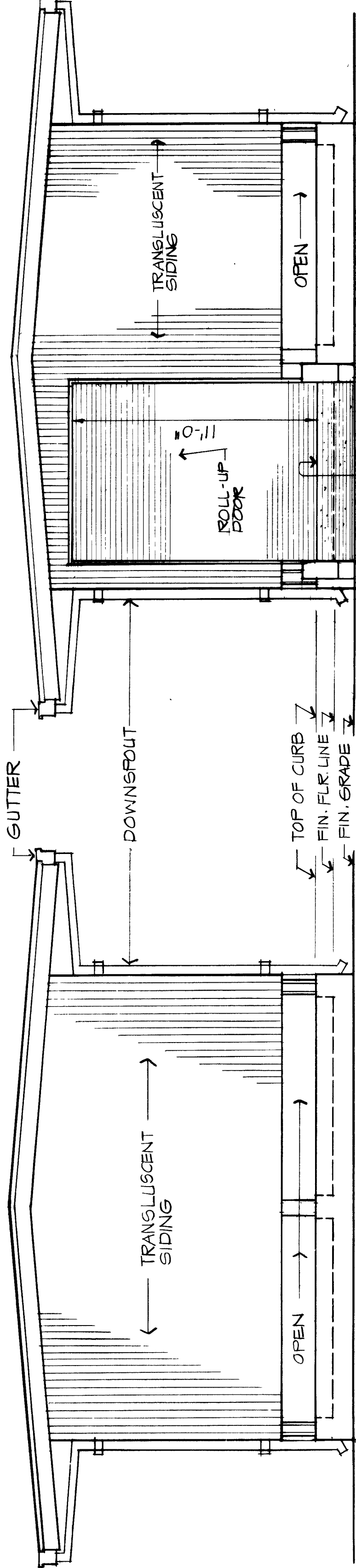
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FLOOR PLAN



EAST ELEVATION



SOUTH ELEVATION

NORTH ELEVATION

GENERAL NOTES

- BUILDING STEEL FRAME (COLUMNS, BEAMS, GIRTS, PURLINS) PAINTED (MTC PAINT INTERIOR PER SPEC. FIG. 11.2.11)
- PRE-ENGINEERED BUILDING DESIGN CRITERIA:  
WIND LOADS PER ANSI A-58.1-1982  
BASIC WIND SPEED "V" SHALL BE 110 MPH  
IMPORTANCE FACTOR "I" SHALL BE 1.05  
K<sub>2</sub>, G<sub>1</sub>, G<sub>2</sub> BASED ON EXPOSURE C
- ROLLING DOORS SHALL BE GALVANIZED, INTERIOR MOUNTED, CHAIN HOIST OPERATION.  
CHAIN HOIST SHALL BE THRU WALL, EXTERIOR MOUNTED W/ EXTERIOR HOIST COVER.  
FIELD PAINT DOOR, HOOD & HOIST COVER TO MATCH METAL SIDING.  
ROLLING DOOR: "OVERHEAD DOOR" FN 2.  
REFER SPEC. 19G11-R-13
- VERIFY PURLIN & GIRT SPACING TO MEET DESIGN LOADS & MAXIMUM PERMISSIBLE SPANS FOR METAL ROOF & TRANSLUCENT SIDING.
- TRENCH & SUMP GRATING: 2 1/2" x 1/4" W/ BARS @ 13/16" O.C.  
PROVIDE CONTINUOUS SLOPE ANGLE FRAME FOR GRATING.  
SLOPE TRENCH 4" TO SUMP.
- REFER DRAWG. 9D-001-901 FOR FLOT PLAN
- "FINISH GRADE" IS TO BE AT ELEV. 17.5 FT.
- "FINISH FLOOR" IS TO BE AT ELEV. 18.5 FT.

## Appendix C

### Secondary Containment Volume Calculation~~Closure Plan and Cost~~ ~~Estimate~~

## Volume of VCM CSA Secondary Containment

### Based On:

Dwg. 90-00-R-055

Dwg. R.C.R.A. Drum Storage Area - Sheet 1 of 2

### Equations

Volume of a Box = Length \* Width \* Depth (Height)

Volume of a Right Angle Triangle =  $1/2 * \text{Length} * \text{Width} * \text{Depth (Height)}$

### Area 1 - Gross Volume

|                                      |        |                 |                                |
|--------------------------------------|--------|-----------------|--------------------------------|
| Width of Containment Area            | 19.42  | ft              |                                |
| Length of Containment Area           | 39.42  | ft              |                                |
| Average Depth at Perimeter           | 0.68   | ft              |                                |
| Top of Concrete Elevation            | 19.77  | ft              |                                |
| Elevation at Trench and Sump         | 18.94  | ft              |                                |
| Average Depth at Trench and Sump     | 0.83   | ft              |                                |
| Volume of Average Depth (0.68')      | 520.56 | ft <sup>3</sup> | Volume of Box                  |
| Ht. Diff. - Perimeter to Trench/Sump | 0.15   | ft              |                                |
| Volume of Sloped Area                | 57.42  | ft <sup>3</sup> | Volume of Right Angle Triangle |
| Gross Volume                         | 577.98 | ft <sup>3</sup> |                                |

### Area 2 - Trench Volume

|                                    |       |                 |               |
|------------------------------------|-------|-----------------|---------------|
| Trench Length                      | 27.95 | ft              |               |
| Trench Width                       | 1.00  | ft              |               |
| Average Bottom of Trench Elevation | 18.10 | ft              |               |
| Trench Depth                       | 0.84  | ft              |               |
| Volume of Trench                   | 23.48 | ft <sup>3</sup> | Volume of Box |

### Area 3 - Sump Volume

|                          |       |                 |               |
|--------------------------|-------|-----------------|---------------|
| Sump Length              | 2.00  | ft              |               |
| Sump Width               | 2.00  | ft              |               |
| Bottom of Sump Elevation | 16.95 | ft              |               |
| Sump Depth               | 1.99  | ft              |               |
| Volume of Sump           | 7.96  | ft <sup>3</sup> | Volume of Box |



**Area 4 - Ramp Volume**

|                |       |                 |                                |
|----------------|-------|-----------------|--------------------------------|
| Length of Ramp | 5.17  | ft              |                                |
| Width of Ramp  | 8.00  | ft              |                                |
| Height of Ramp | 0.75  | ft              |                                |
| Volume of Ramp | 15.51 | ft <sup>3</sup> | Volume of Right Angle Triangle |

**Area 5 - Pedestal Volume**

|                            |      |                 |               |
|----------------------------|------|-----------------|---------------|
| Average Depth at Perimeter | 0.68 | ft              |               |
| 4 x 1/4 Pedestal Block =   | 1    | Unit            |               |
| 4 x 1/2 Pedestal Block =   | 2    | Units           |               |
| Total Pedestal Units       | 3    | Units           |               |
| Pedestal Length            | 1.00 | ft              |               |
| Pedestal Width             | 0.33 | ft              |               |
| Pedestal Volume            | 0.22 | ft <sup>3</sup> | Volume of Box |
| Total Pedestal Volume      | 0.67 | ft <sup>3</sup> |               |

**Total Volume**

|                                        |        |                 |
|----------------------------------------|--------|-----------------|
| 1 + 2 + 3 - 4 - 5                      | 593.23 | ft <sup>3</sup> |
| 7.4805 gal/ft <sup>3</sup>             | 4,438  | gallons         |
| VCM CSA Storage Volume                 | 9,240  | gallons         |
| Minimum 10% of Storage Volume          | 924    | gallons         |
| Therefore, Adequate Containment Volume |        |                 |



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## **Attachment V.C**

### **Tanks and Tank Systems**





## **Attachment V.C.1**

### **C-720A Tank System**

**Attachment V.C.1**

**Tank C-720A Report**

**OxyChem**  
**Ingleside, Texas**



10/24/2025

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TBPE Firm Registration No. - F-19813

# **Attachment V.C.1**

## **Tank C-720A Report**

**OxyChem**  
**Ingleside, Texas**



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| Appendix C | Example Daily Inspection Form                                                  |
| Appendix D | <del>Secondary Containment Volume Calculation</del><br><del>Closure Plan</del> |

## 2.0 Tank System Plans and Specifications

Tank C-720A will receive the following waste streams identified in the Waste Analysis Plan (Attachment IV.D), which may contain a variety of EPA waste codes, for collection and storage prior to subsequent treatment:

- Waste oil;
- VCM heavy ends;
- VCM light ends;
- Mother liquor; and
- EDC heavy ends.

Feed systems used to transfer waste to the tank will generally consist of pumps, hard piping, connections, and controllers necessary for safe transport. Incoming wastes may be introduced into RCRA permitted storage tanks using one of two methods. The primary feed system mechanism will consist of hard piping from the production process to the storage tank. In addition to hard piping from production areas to the tank, piping (hard and/or flex) may also be used, at times, to transfer wastes associated with common tank groupings to facilitate processing and/or treatment. When flexible piping is used, it will consist of stainless steel piping with sufficient strength for the operating pressures.

Since waste streams managed in the tank may be ignitable, the tank is equipped with a nitrogen blanket in the tank headspace. All tank vents are routed to appropriate emission controls.

### 2.1 Tank

C-720A is an elevated, spherical tank with a diameter of 26 feet and nominal capacity of 65,000 gallons. ~~Engineering d~~Drawings for the tank are provided as Appendix A. The tank is constructed of SA516-70 carbon steel designed and constructed in accordance with American Society of Mechanical Engineers (ASME) Section VIII, Division 1 criteria. The tank is a pressure vessel with a pressure of 15 psi at 200 °F. Tanks used by OxyChem to store RCRA hazardous wastes are designed based on appropriate American Society of Testing and Materials (ASTM) grade materials and are designed based on ASME standards.

A detailed, ~~engineering~~ description of the tank, which contains a written assessment of the tank's structural integrity and suitability for waste handling was performed and has been prepared by an independent, qualified, registered professional engineer as required under 40

CFR 264.192, is provided as Appendix B. The tank report, ~~engineering~~ drawings, and associated integrity assessment demonstrates that the tank system has been adequately designed and has sufficient structural strength and compatibility with the waste(s) stored, to ensure that it will not collapse, rupture, or fail. The assessment considers design standards, waste characteristics, corrosion control measures, age of the system, and results of a tank integrity examination.

Wastes managed in the tank are assessed for their potential impact on the materials of the tank, pipes, valves, pumps, and other ancillary equipment. Materials of construction for the tank are then selected based on their compatibility with the wastes. Wastes are subsequently evaluated and tested, as necessary, to ensure that the wastes do not impact the integrity of the system.

Tank C-720A is aboveground and situated on a concrete foundation. As such, external shell and metal components will not come in contact with soil or water under normal conditions and corrosion is minimized.

The tank operates under a nitrogen blanketing system designed to displace any oxygen that may be present and maintains a slight pressure of nitrogen in the vapor space.

To prevent spills/overfills from the tank, the following are in place:

- Work practices, training, and procedures for operators and contractors;
- Level sensors in the tank;
- High level alarm for the tank; and
- Controllers to facilitate rapid waste shutdown.

## 2.2 Ancillary Equipment

Ancillary equipment associated with the tank includes typical equipment (e.g., hard piping, connections, pumps, controllers, etc.) associated with the tank as well as equipment specific to the tank's use. To facilitate transfer between tanks and/or optimize operations, flexible, stainless steel, hose piping may also be used in conjunction with storage activities.

Ancillary equipment is supported (e.g., bolted, saddled, strapped, etc.) as necessary to prevent damage that could result from vibration associated with operation or from stresses that could arise from environmental factors (e.g., settlement, expansion).



## 5.5 Secondary Containment

Secondary containment is operated and maintained to control and contain spills, leaks, other releases of hazardous wastes, water and chemical agents used to control a fire, and precipitation falling within the tank or secondary containment areas. The secondary containment volume calculation is included in Appendix D. As presented in Attachment V.A, Appendix D, the 25-year, 24-hour rainfall event for the facility is 10.1 inches, which is accounted for in the secondary containment volume calculations as required by 40 CFR 264.193(e)(1)(ii). The secondary containment volume is 72,097 gallons, which is greater than the largest tank within its boundary (i.e., 65,000 gallons) as required by 40 CFR 264.193(e)(1)(i).

Spilled hazardous wastes in the secondary containment area may be collected and transferred to a suitable tank, collected by vacuum truck, or cleaned up using absorbents which would be put into containers, for treatment and/or disposal at an authorized facility. If spilled wastes are pumped into a tank, the contents of the tank are processed, or treated and disposed of in an appropriate facility as soon as possible in order to restore capacity to the tank system.

Residues or contaminated solids generated during a cleanup or emergency will be collected and placed in appropriate containers for subsequent management at an authorized facility. These wastes are handled as hazardous, unless they can otherwise be shown to be non-hazardous by appropriate testing and regulations.

## 5.6 Containment and Liquids Removal

Spills, leaks, or other released materials will be contained within the tank area secondary containment system. Immediately upon detection of the leak, personnel would check to ensure that the containment valves are closed and take steps to ensure that incoming flow to the affected equipment is blocked. If the leak is significant, the contents of the leaking tank will be transferred to another suitable tank or container until the level is below that of the leak. A RCRA hazardous determination will be made on spilled material and appropriate action taken.

As soon as possible, OxyChem will clean up leaks or spills of waste in secondary containment in order to reduce the potential for contamination. Under normal conditions, rainfall or other waters (e.g., wash water) collected in the secondary containment area will not be hazardous.

Therefore, collected rainfall and routine wash water will be managed as non-hazardous and discharged to the wastewater system.

Under certain conditions, it is necessary to manage rainfall/wash water as a RCRA hazardous waste:

- If a leak or spill of hazardous waste has not been cleaned up prior to a rainfall;
- If wash water is used to clean up after a leak or spill of hazardous waste; or
- If a leak or spill of hazardous waste occurs while rainfall or wash water is on the containment pad.

## 5.7 Emergency Response

Inflows to the tank will be stopped if an emergency situation occurs involving the tank and/or ancillary equipment, including electrical or equipment failure, or fire. If necessary, the storage tanks may be cooled by using the tank farm water deluge system. Depending upon the magnitude of a spill, a layer of water will be maintained over spilled material to prevent volatilization or the spread of fires. Furthermore, water deluge may be used to flush flammable or toxic material to the secondary containment basin. Emergency response materials collected in the secondary containment basin will be handled as RCRA hazardous waste if they are classified as hazardous waste via the Mixture Rule.

## 6.0 Closure

A closure plan, which describes the procedures that will be implemented for closure of Tank C-720A, is provided in Attachment VII.A.2 as Appendix D. ~~Historically prepared closure cost estimates, which were reviewed and approved by TCEQ in prior applications, are also provided as part of the closure plan. However, it should be noted that these closure cost estimates were developed using an overly conservative costing assumption that contaminated soils would be present. That assumption has not been carried over to the closure cost tables in the Part B application form. Also, at the time of closure OxyChem intends to use facility personnel and appropriate contractors to perform closure activities with supervision provided by an independent, licensed professional engineer.~~



## Appendix A

### **Equipmentengineering Drawings**

Dwg. 7D-00-A-700, Rev. 5 – EDC Product Storage – Area 7

Dwg. Record Drawing – Elevation – C-720A

Dwg. DS-C-720, Rev. 3 – Elevation

Dwg. 7D-80-Q-007 – Foundation for Tank

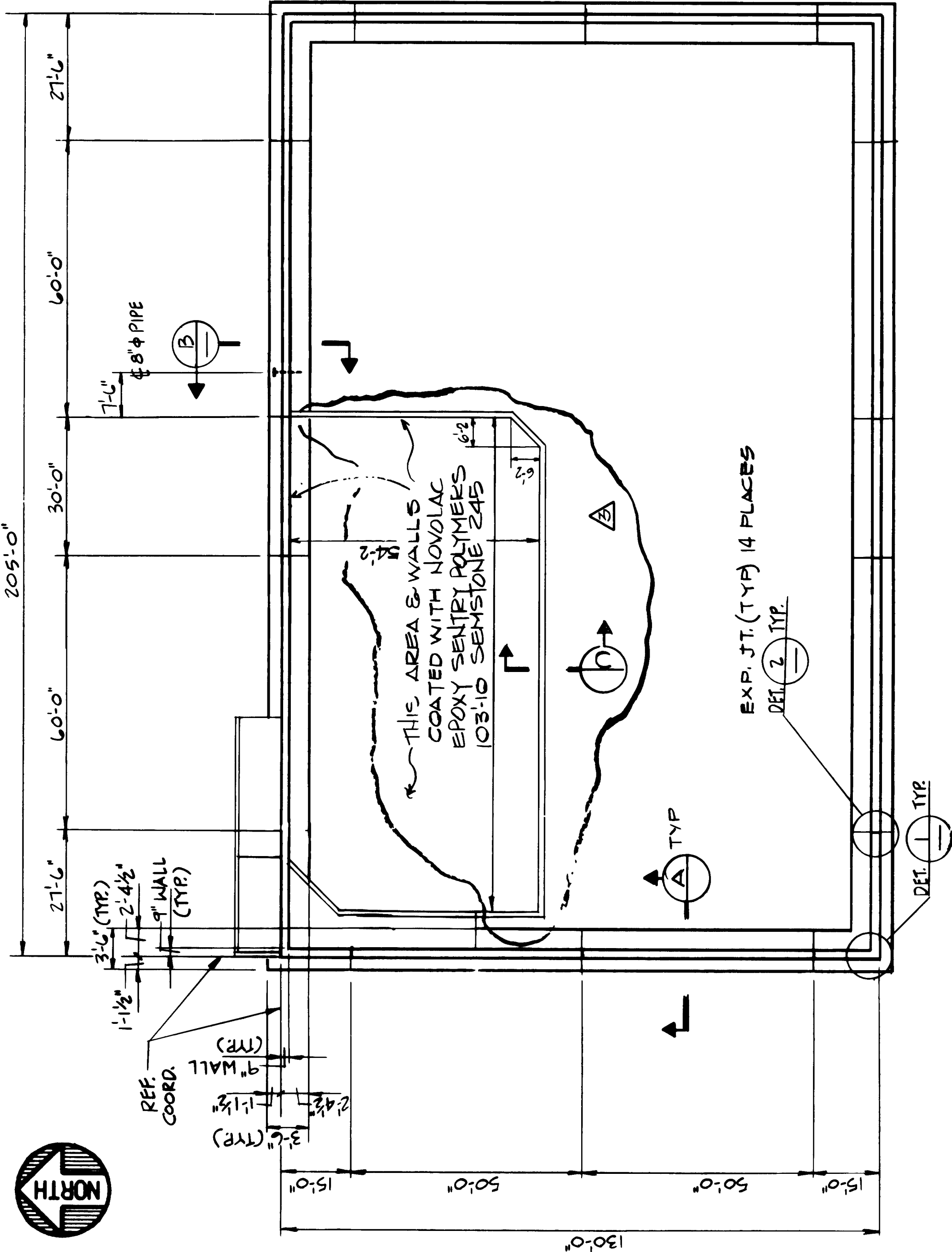
Dwg. DS-C-720, Rev.3 – Design Requirements

Dwg. 7D-A-004, Rev. 39 – Engineering Flow Diagram – Co-Product Storage

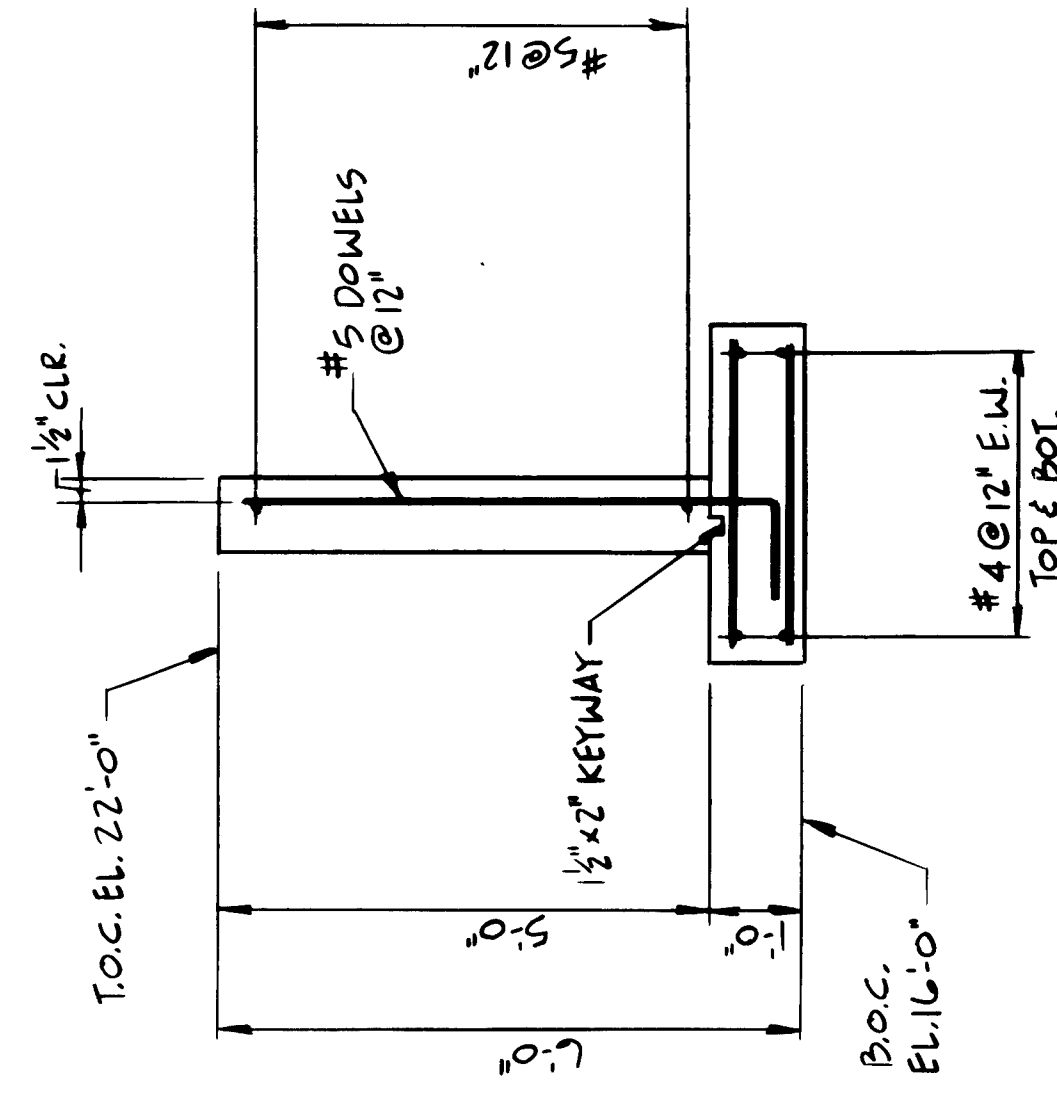
Dwg. 7D-B-003, Rev. 5 – VCM Plant PFD – Co-Product Storage

Dwg. 7D-00-Q-023, Rev. 3 – Concrete Dike – EDC Storage

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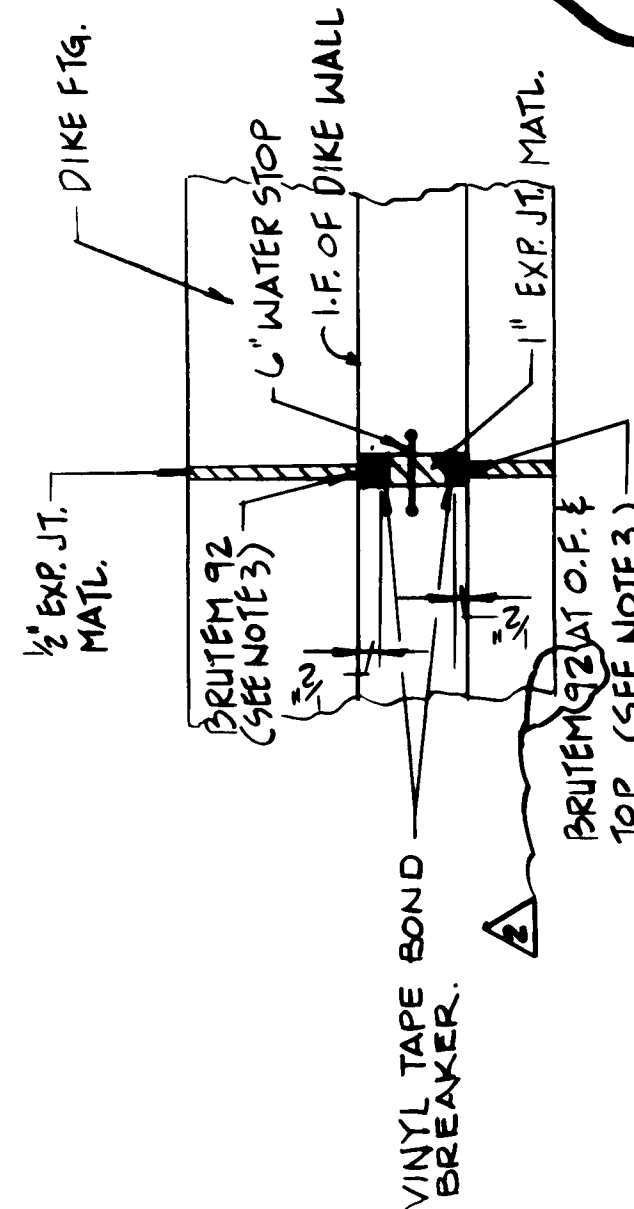


PLAN  
N.T.S.

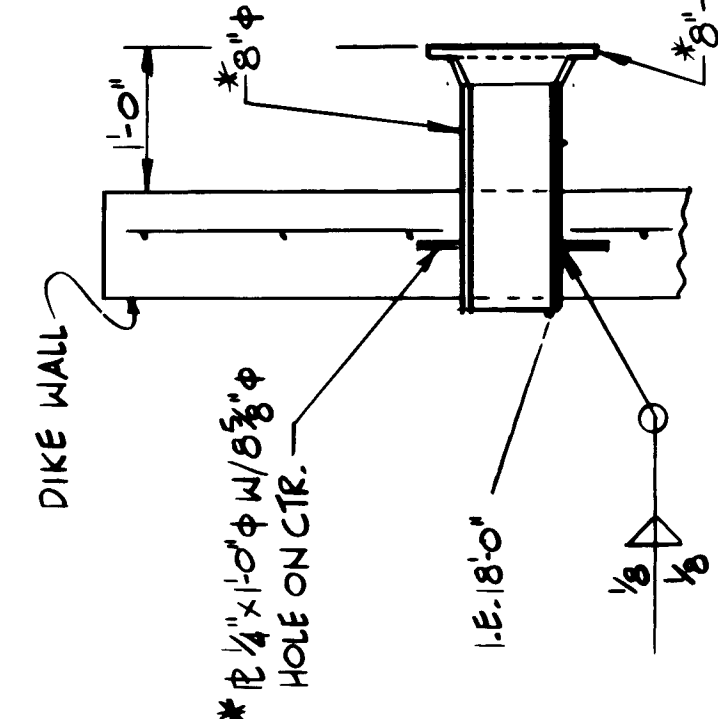


SECTION A  
N.T.S.

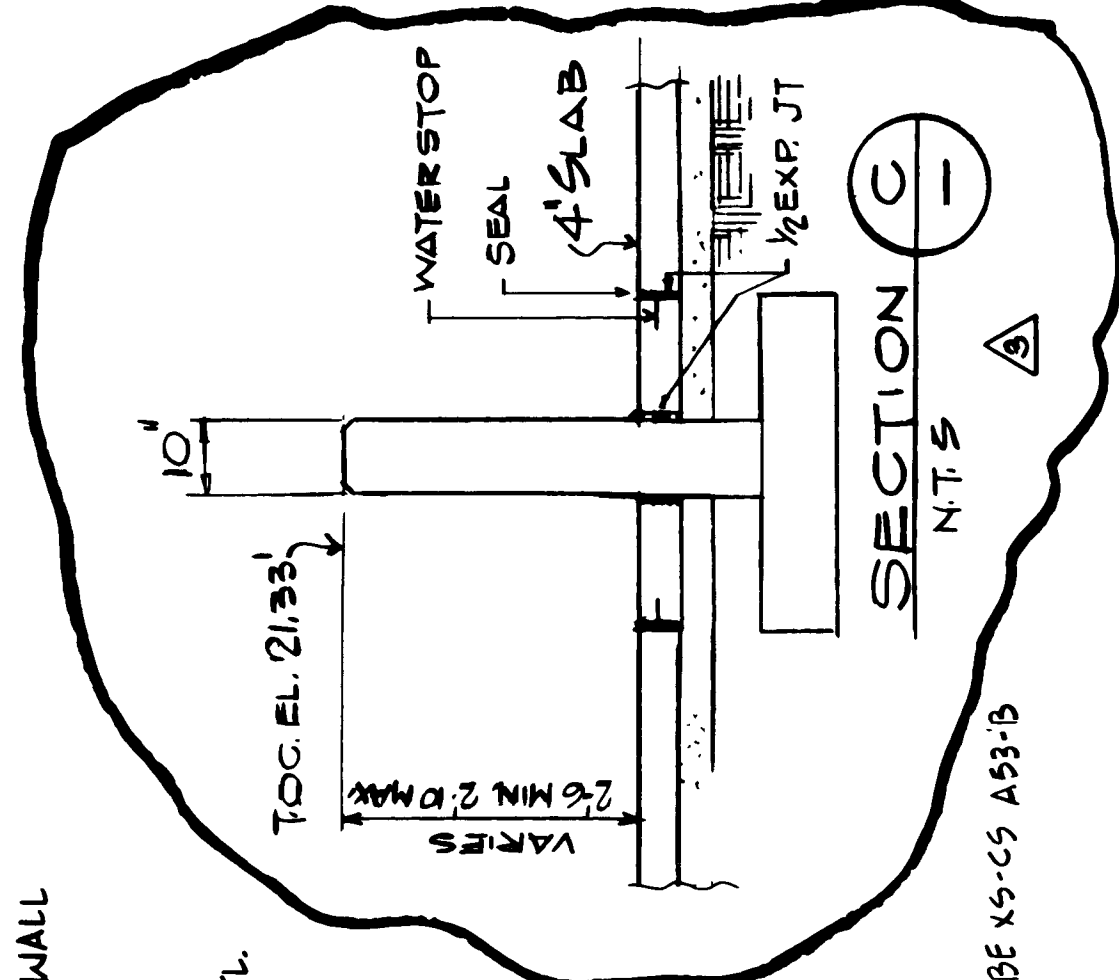
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N.T.S.



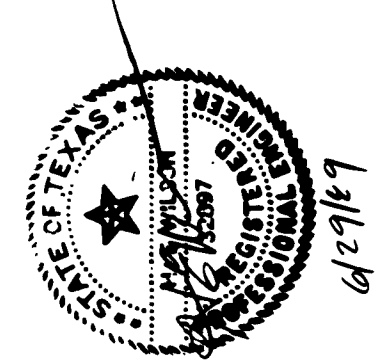
DETAIL 2  
N.T.S.



DETAIL 3  
N.T.S.



SECTION C  
N.T.S.



NOTES

- 1) FOR LOCATION SEE PLOT PLAN DWG. 1D-00A-100
- 2) FOR DESIGN AND CONSTRUCTION NOTES FOR REINFORCED CONCRETE SEE DWG. 00-A-Q-1
- 3) JOINT SEALANTS TO BE BRUTEM AS MANUFACTURED BY I.W. INDUSTRIES, HOUSTON TX. REFER TO NOTES 12 & 13 ON DWG. 9D-00-S-078.
- 4) FOR PAVING SEE DWG. 9I-00-S-082

REFERENCE DRAWINGS

PLOT PLAN  
1D-00A-100  
DESIGN & CONST. NOTES  
00-A-Q-1

| NO. | DATE     | REVISIONS                                        | BY | CHKD | APPD |
|-----|----------|--------------------------------------------------|----|------|------|
| 1   | 10/19/17 | RCRA DIKE AS BUILT                               | DE |      |      |
| 2   | 11/14/17 | REVISED SEALANT TYPE                             | DE |      |      |
| 3   | 11/14/17 | ADDED VINYL TAPE BOND BREAKER (DETAIL 2), NOTE 3 | DE |      |      |
| 4   | 11/14/17 | ISSUED FOR CONST                                 | DE |      |      |

BECHTEL, INC.  
HOUSTON

OXYMAR  
VINYL CHLORIDE MONOMER PLANT  
CORPUS CHRISTI, TEXAS

CONCRETE LIKE - EDC STORAGE

| AREA DESIGNATION | TYPE        | EWR NUMBER | AFE NUMBER |
|------------------|-------------|------------|------------|
| 19611            |             |            |            |
| JOB NO.          | DRAWING NO. | REV.       |            |
| 19611            | 7D-00-Q-023 | 3          |            |

## Appendix D

### Secondary Containment Volume Calculation~~Closure Plan~~



## Volume of Tank C-720A Secondary Containment

### Based On:

Dwg. 7D-00-Q-023

Dwg. 7D-80-Q-007

### Equations

Volume of a Box = Length \* Width \* Depth (Height)

Volume of a Right Angle Triangle =  $1/2 * \text{Length} * \text{Width} * \text{Depth (Height)}$

Volume of a Cylinder =  $\pi * \text{Radius}^2 * \text{Length (Height)}$

**25-Year, 24-Hour Storm Event**                      0.84      ft                      10.1"

Required per 40 CFR 264.193(e)(1)(ii)

Source: NOAA Atlas 14, Volume 11, Version 2 - Portland, Texas - 2025-09-18

### Area 1 - Gross Volume

|                                    |           |                 |                                     |
|------------------------------------|-----------|-----------------|-------------------------------------|
| Width of Containment Area          | 54.17     | ft              | 54' 2"                              |
| Length of Containment Area         | 103.83    | ft              | 103' 10"                            |
| Minimum Height of South Wall       | 1.66      | ft              | 2' 6" - 25-Year, 24-Hour Rain Event |
| Minimum Height Volume              | 9,326.97  | ft <sup>3</sup> | Volume of a Box                     |
| Maximum Height of South Wall       | 2.83      | ft              | 2' 10"                              |
| Height Difference                  | 0.33      | ft              | 2' 10" - 2' 6" = 4"                 |
| Volume of Sloped Height Difference | 937.38    | ft <sup>3</sup> | Volume of a Right Angle Triangle    |
| Total Gross Volume                 | 10,264.36 | ft <sup>3</sup> |                                     |

### Area 2 - NW Corner Volume

|                       |        |                 |                                  |
|-----------------------|--------|-----------------|----------------------------------|
| Corner Length         | 14.25  | ft              | 15' 0" - 9" = 14' 3"             |
| Corner Width          | 14.25  | ft              | 15' 0" - 9" = 14' 3"             |
| Maximum Corner Height | 2.83   | ft              | 2' 10"                           |
| Volume of NW Corner   | 287.67 | ft <sup>3</sup> | Volume of a Right Angle Triangle |

### Area 3 - SE Corner Volume

|                       |       |                 |                                  |
|-----------------------|-------|-----------------|----------------------------------|
| Corner Length         | 6.17  | ft              | 6' 2"                            |
| Corner Width          | 6.17  | ft              | 6' 2"                            |
| Maximum Corner Height | 2.83  | ft              | 2' 10"                           |
| Volume of SE Corner   | 53.87 | ft <sup>3</sup> | Volume of a Right Angle Triangle |

**Area 4 - Pier Volume**

|                        |        |                 |                      |
|------------------------|--------|-----------------|----------------------|
| Diameter of Pier       | 2.67   | ft              | 32"                  |
| Radius of Pier         | 1.33   | ft              |                      |
| Maximum Height of Pier | 2.83   | ft              | 2' 10"               |
| Volume of Pier         | 15.82  | ft <sup>3</sup> | Volume of a Cylinder |
| Number of Piers        | 18     |                 |                      |
| Total Volume of Piers  | 284.84 | ft <sup>3</sup> |                      |

**Total Volume**

|                                        |          |                 |                         |
|----------------------------------------|----------|-----------------|-------------------------|
| 1 - 2 - 3 - 4                          | 9,637.98 | ft <sup>3</sup> |                         |
| 7.4805 gal/ft <sup>3</sup>             | 72,097   | gallons         |                         |
| Largest Storage Tank Volume            | 65,000   | gallons         |                         |
| Min. 100% of Largest Tank Volume       | 65,000   | gallons         | 40 CFR 264.193(e)(1)(i) |
| Therefore, Adequate Containment Volume |          |                 |                         |



ATLAS TECHNICAL CONSULTANTS LLC  
15740 Park Row Drive, Suite 200  
Houston, TX 77084  
TBPE Firm Registration No. - F-19813

## **Attachment V.C.2**

### **C-720B Tank System**



## **Attachment V.C.2**

### **Tank C-720B Report**

**OxyChem**  
**Ingleside, Texas**



ATLAS TECHNICAL CONSULTANTS LLC  
15740 Park Row Drive, Suite 200  
Houston, TX 77084  
TBPE Firm Registration No. - F-19813

# **Attachment V.C.2**

## **Tank C-720B Report**

**OxyChem**  
**Ingleside, Texas**

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| 2.2 | Ancillary Equipment .....                            | 3  |
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## Appendices

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| Appendix A | <del>Equipment engineering</del> Drawings                               |
| Appendix B | Integrity Assessment Report                                             |
| Appendix C | Example Daily Inspection Form                                           |
| Appendix D | <u>Secondary Containment Volume Calculation</u> <del>Closure Plan</del> |



## 2.0 Tank System Plans and Specifications

Tank C-720B will receive the following waste streams identified in the Waste Analysis Plan (Attachment IV.D), which may contain a variety of EPA waste codes, for collection and storage prior to subsequent treatment:

- Waste oil;
- VCM heavy ends;
- VCM light ends;
- Mother liquor; and
- EDC heavy ends.

Feed systems used to transfer waste to the tank will generally consist of pumps, hard piping, connections, and controllers necessary for safe transport. Incoming wastes may be introduced into RCRA permitted storage tanks using one of two methods. The primary feed system mechanism will consist of hard piping from the production process to the storage tank. In addition to hard piping from production areas to the tank, piping (hard and/or flex) may also be used, at times, to transfer wastes associated with common tank groupings to facilitate processing and/or treatment. When flexible piping is used, it will consist of stainless steel piping with sufficient strength for the operating pressures.

Since waste streams managed in the tank may be ignitable, the tank is equipped with a nitrogen blanket in the tank headspace. All tank vents are routed to appropriate emission controls.

### 2.1 Tank

C-720B is an elevated, spherical tank with a diameter of 26 feet and nominal capacity of 65,000 gallons. ~~Engineering-d~~Drawings for the tank are provided as Appendix A. The tank is constructed of SA516-70 carbon steel designed and constructed in accordance with American Society of Mechanical Engineers (ASME) Section VIII, Division 1 criteria. The tank is a pressure vessel with a pressure of 15 psi at 200 °F. Tanks used by OxyChem to store RCRA hazardous wastes are designed based on appropriate American Society of Testing and Materials (ASTM) grade materials and are designed based on ASME standards.

A detailed, ~~engineering~~ description of the tank, which contains a written assessment of the tank's structural integrity and suitability for waste handling was performed and has been prepared by an independent, qualified, registered professional engineer as required under 40

CFR 264.192, is provided as Appendix B. The tank report, ~~engineering~~ drawings, and associated integrity assessment demonstrates that the tank system has been adequately designed and has sufficient structural strength and compatibility with the waste(s) stored, to ensure that it will not collapse, rupture, or fail. The assessment considers design standards, waste characteristics, corrosion control measures, age of the system, and results of a tank integrity examination.

Wastes managed in the tank are assessed for their potential impact on the materials of the tank, pipes, valves, pumps, and other ancillary equipment. Materials of construction for the tank are then selected based on their compatibility with the wastes. Wastes are subsequently evaluated and tested, as necessary, to ensure that the wastes do not impact the integrity of the system.

Tank C-720B is aboveground and situated on a concrete foundation. As such, external shell and metal components will not come in contact with soil or water under normal conditions and corrosion is minimized.

The tank operates under a nitrogen blanketing system designed to displace any oxygen that may be present and maintains a slight pressure of nitrogen in the vapor space.

To prevent spills/overfills from the tank, the following are in place:

- Work practices, training, and procedures for operators and contractors;
- Level sensors in the tank;
- High level alarm for the tank; and
- Controllers to facilitate rapid waste shutdown.

## 2.2 Ancillary Equipment

Ancillary equipment associated with the tank includes typical equipment (e.g., hard piping, connections, pumps, controllers, etc.) associated with the tank as well as equipment specific to the tank's use. To facilitate transfer between tanks and/or optimize operations, flexible, stainless steel, hose piping may also be used in conjunction with storage activities.

Ancillary equipment is supported (e.g., bolted, saddled, strapped, etc.) as necessary to prevent damage that could result from vibration associated with operation or from stresses that could arise from environmental factors (e.g., settlement, expansion).

## 5.5 Secondary Containment

Secondary containment is operated and maintained to control and contain spills, leaks, other releases of hazardous wastes, water and chemical agents used to control a fire, and precipitation falling within the tank or secondary containment areas. The secondary containment volume calculation is included in Appendix D. As presented in Attachment V.A, Appendix D, the 25-year, 24-hour rainfall event for the facility is 10.1 inches, which is accounted for in the secondary containment volume calculations as required by 40 CFR 264.193(e)(1)(ii). The secondary containment volume is 72,097 gallons, which is greater than the largest tank within its boundary (i.e., 65,000 gallons) as required by 40 CFR 264.193(e)(1)(i).

Spilled hazardous wastes in the secondary containment area may be collected and transferred to a suitable tank, collected by vacuum truck, or cleaned up using absorbents which would be put into containers, for treatment and/or disposal at an authorized facility. If spilled wastes are pumped into a tank, the contents of the tank are processed, or treated and disposed of in an appropriate facility as soon as possible in order to restore capacity to the tank system.

Residues or contaminated solids generated during a cleanup or emergency will be collected and placed in appropriate containers for subsequent management at an authorized facility. These wastes are handled as hazardous, unless they can otherwise be shown to be non-hazardous by appropriate testing and regulations.

## 5.6 Containment and Liquids Removal

Spills, leaks, or other released materials will be contained within the tank area secondary containment system. Immediately upon detection of the leak, personnel would check to ensure that the containment valves are closed and take steps to ensure that incoming flow to the affected equipment is blocked. If the leak is significant, the contents of the leaking tank will be transferred to another suitable tank or container until the level is below that of the leak. A RCRA hazardous determination will be made on spilled material and appropriate action taken.

As soon as possible, OxyChem will clean up leaks or spills of waste in secondary containment in order to reduce the potential for contamination. Under normal conditions, rainfall or other waters (e.g., wash water) collected in the secondary containment area will not be hazardous.



Therefore, collected rainfall and routine wash water will be managed as non-hazardous and discharged to the wastewater system.

Under certain conditions, it is necessary to manage rainfall/wash water as a RCRA hazardous waste:

- If a leak or spill of hazardous waste has not been cleaned up prior to a rainfall;
- If wash water is used to clean up after a leak or spill of hazardous waste; or
- If a leak or spill of hazardous waste occurs while rainfall or wash water is on the containment pad.

## 5.7 Emergency Response

Inflows to the tank will be stopped if an emergency situation occurs involving the tank and/or ancillary equipment, including electrical or equipment failure, or fire. If necessary, the storage tanks may be cooled by using the tank farm water deluge system. Depending upon the magnitude of a spill, a layer of water will be maintained over spilled material to prevent volatilization or the spread of fires. Furthermore, water deluge may be used to flush flammable or toxic material to the secondary containment basin. Emergency response materials collected in the secondary containment basin will be handled as RCRA hazardous waste if they are classified as hazardous waste via the Mixture Rule.

## 6.0 Closure

A closure plan, which describes the procedures that will be implemented for closure of Tank C-720B, is provided in Attachment VII.A.3 as Appendix D. ~~Historically prepared closure cost estimates, which were reviewed and approved by TCEQ in prior applications, are also provided as part of the closure plan. However, it should be noted that these closure cost estimates were developed using an overly conservative costing assumption that contaminated soils would be present. That assumption has not been carried over to the closure cost tables in the Part B application form. Also, at the time of closure OxyChem intends to use facility personnel and appropriate contractors to perform closure activities with supervision provided by an independent, licensed professional engineer.~~

## Appendix A

### **Equipmentengineering Drawings**

Dwg. 7D-00-A-700, Rev. 5 – EDC Product Storage – Area 7

Dwg. Record Drawing – Elevation – C-720B

Dwg. DS-C-720, Rev. 3 – Elevation

Dwg. 7D-80-Q-007 – Foundation for Tank

Dwg. DS-C-720, Rev.3 – Design Requirements

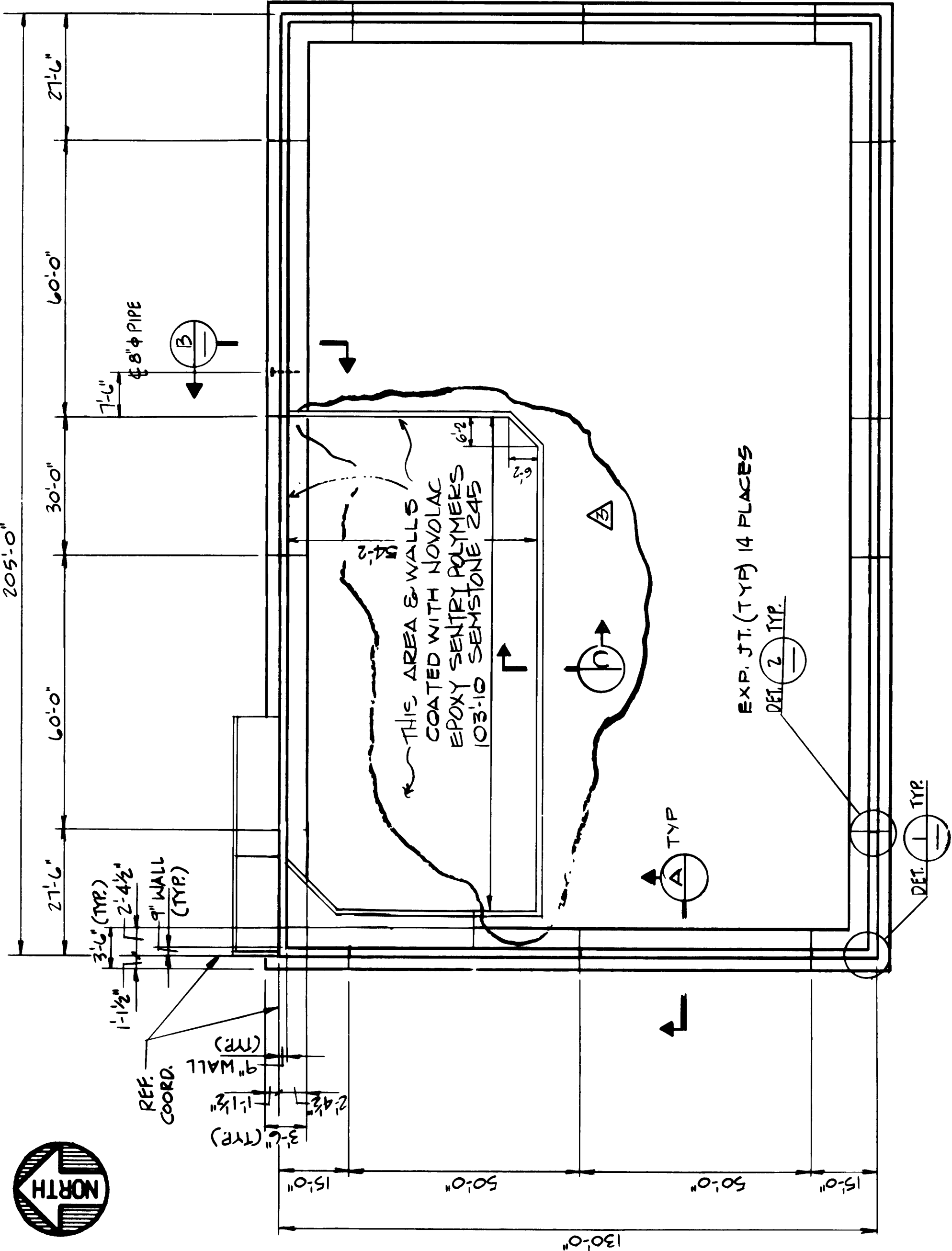
Dwg. 7D-A-004, Rev. 39 – Engineering Flow Diagram – Co-Product Storage

Dwg. 7D-B-003, Rev. 5 – VCM Plant PFD – Co-Product Storage

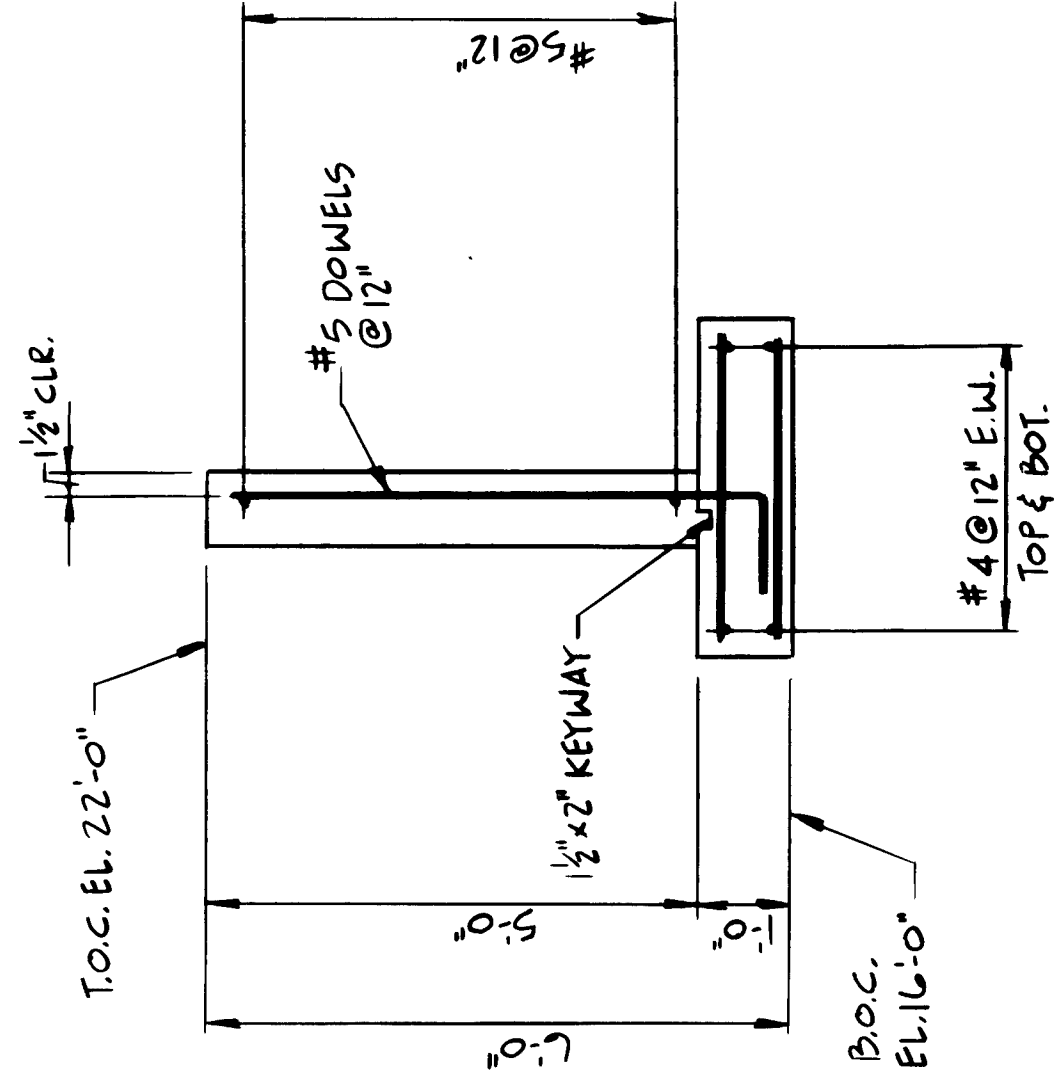
Dwg. 7D-00-Q-023, Rev. 3 – Concrete Dike – EDC Storage



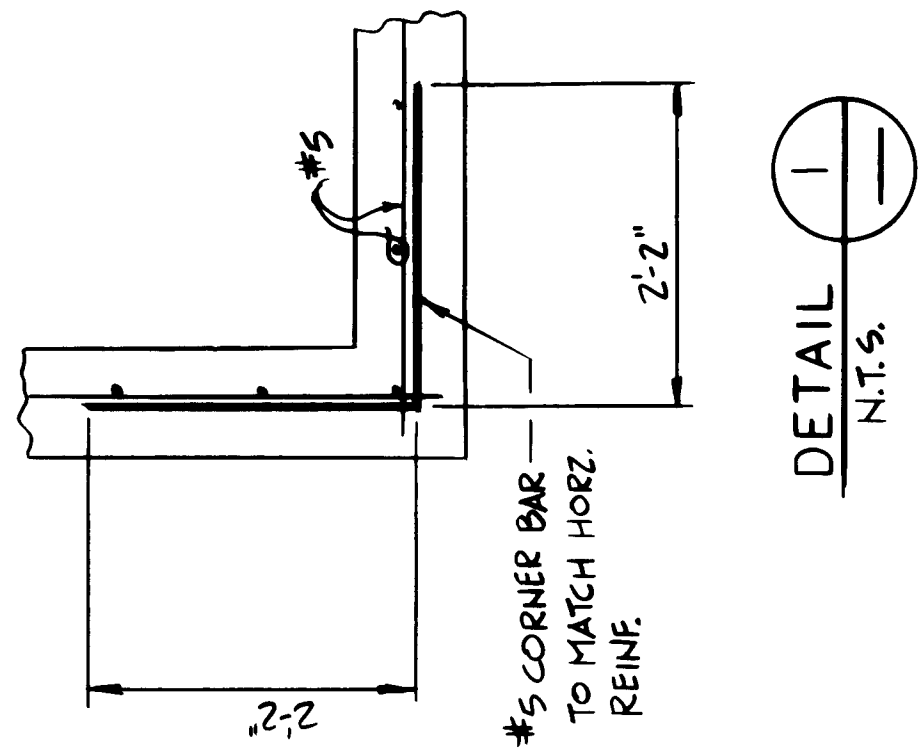
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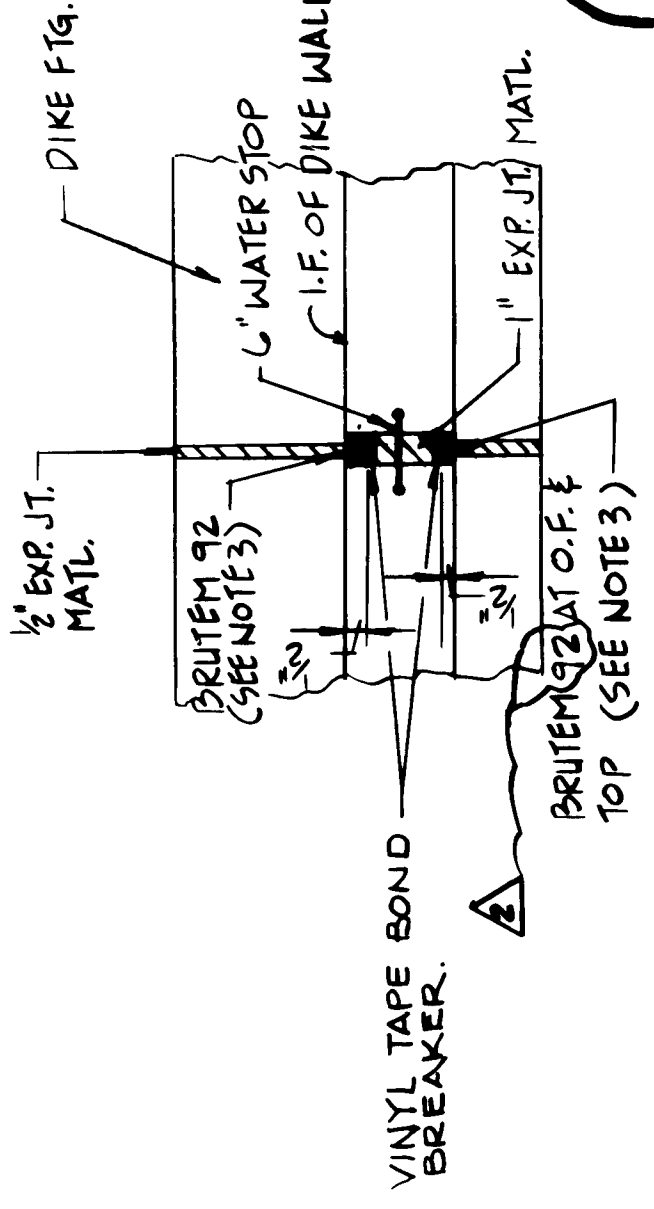
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N.T.S.



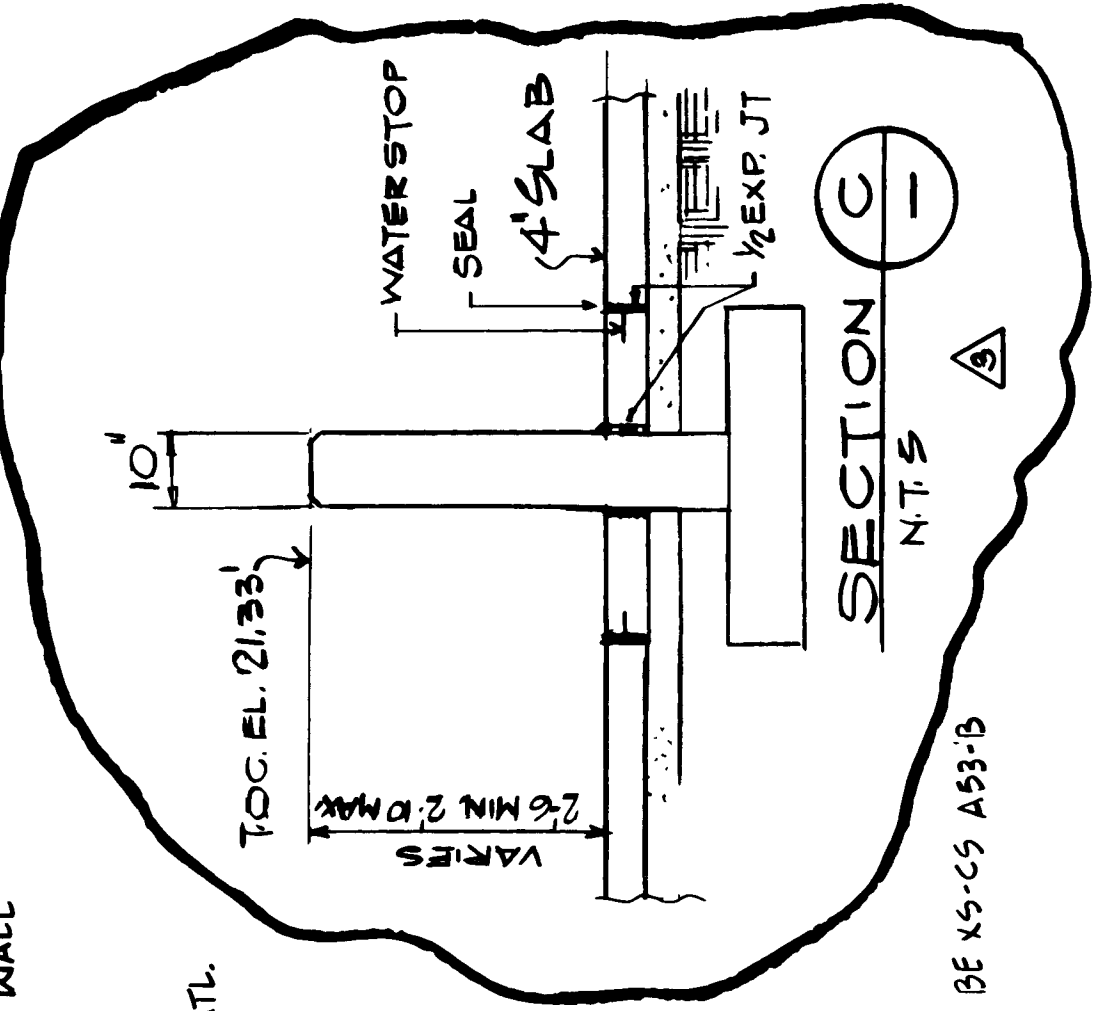
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N.T.S.



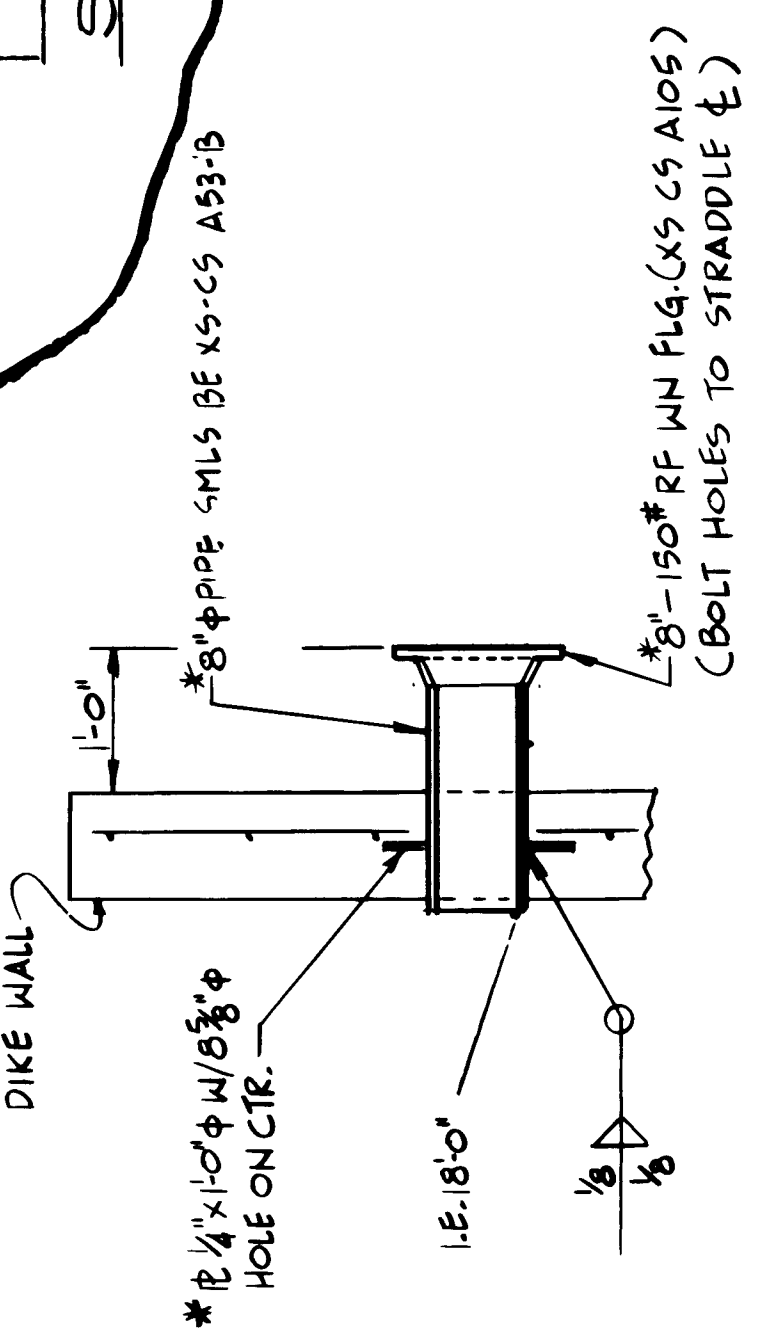
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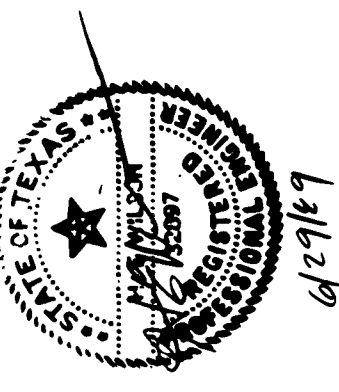
DETAIL 2  
N.T.S.



SECTION C  
N.T.S.



SECTION B  
N.T.S.



## NOTES

- 1) FOR LOCATION SEE PLOT PLAN DWG. 1D-00A-100
- 2) FOR DESIGN AND CONSTRUCTION NOTES FOR REINFORCED CONCRETE SEE DWG. 00-A-Q-1
- 3) JOINT SEALANTS TO BE BRUTEM AS MANUFACTURED BY I.W. INDUSTRIES, HOUSTON TX. REFER TO NOTES 12 & 13 ON DWG. 9D-00-S-078.
- 4) FOR PAVING SEE DWG. 9I-00-S-082

## REFERENCE DRAWINGS

PLOT PLAN  
1D-00A-100  
DESIGN & CONST. NOTES  
00-A-Q-1

| NO. | DATE     | REVISIONS                                        | BY | CHKD | APPD |
|-----|----------|--------------------------------------------------|----|------|------|
| 1   | 10/19/17 | RCRA DIKE AS BUILT                               | DE |      |      |
| 2   | 11/14/17 | REVISED SEALANT TYPE                             | DE |      |      |
| 3   | 11/14/17 | ADDED VINYL TAPE BOND BREAKER (DETAIL 2), NOTE 3 | DE |      |      |
| 4   | 11/14/17 | ISSUED FOR CONST                                 | DE |      |      |

BECHTEL, INC.  
HOUSTON

OXYMAR  
VINYL CHLORIDE MONOMER PLANT  
CORPUS CHRISTI, TEXAS

CONCRETE LIKE - EDC STORAGE

|                                                                                    |  |         |  |             |  |            |  |
|------------------------------------------------------------------------------------|--|---------|--|-------------|--|------------|--|
|  |  | JOB NO. |  | DRAWING NO. |  | REV.       |  |
| AREA DESIGNATION                                                                   |  | TYPE    |  | EWR NUMBER  |  | A/E NUMBER |  |
| 19611                                                                              |  |         |  | 7D-00-Q-023 |  | 3          |  |

22 X 34 "D" SIZE

## Appendix D

### Secondary Containment Volume Calculations~~Closure Plan~~

### Volume of Tank C-720B Secondary Containment

#### Based On:

Dwg. 7D-00-Q-023

Dwg. 7D-80-Q-007

#### Equations

Volume of a Box = Length \* Width \* Depth (Height)

Volume of a Right Angle Triangle =  $1/2 * \text{Length} * \text{Width} * \text{Depth (Height)}$

Volume of a Cylinder =  $\pi * \text{Radius}^2 * \text{Length (Height)}$

**25-Year, 24-Hour Storm Event**                      0.84      ft                      10.1"

Required per 40 CFR 264.193(e)(1)(ii)

Source: NOAA Atlas 14, Volume 11, Version 2 - Portland, Texas - 2025-09-18

#### Area 1 - Gross Volume

|                                    |           |                 |                                     |
|------------------------------------|-----------|-----------------|-------------------------------------|
| Width of Containment Area          | 54.17     | ft              | 54' 2"                              |
| Length of Containment Area         | 103.83    | ft              | 103' 10"                            |
| Minimum Height of South Wall       | 1.66      | ft              | 2' 6" - 25-Year, 24-Hour Rain Event |
| Minimum Height Volume              | 9,326.97  | ft <sup>3</sup> | Volume of a Box                     |
| Maximum Height of South Wall       | 2.83      | ft              | 2' 10"                              |
| Height Difference                  | 0.33      | ft              | 2' 10" - 2' 6" = 4"                 |
| Volume of Sloped Height Difference | 937.38    | ft <sup>3</sup> | Volume of a Right Angle Triangle    |
| Total Gross Volume                 | 10,264.36 | ft <sup>3</sup> |                                     |

#### Area 2 - NW Corner Volume

|                       |        |                 |                                  |
|-----------------------|--------|-----------------|----------------------------------|
| Corner Length         | 14.25  | ft              | 15' 0" - 9" = 14' 3"             |
| Corner Width          | 14.25  | ft              | 15' 0" - 9" = 14' 3"             |
| Maximum Corner Height | 2.83   | ft              | 2' 10"                           |
| Volume of NW Corner   | 287.67 | ft <sup>3</sup> | Volume of a Right Angle Triangle |

#### Area 3 - SE Corner Volume

|                       |       |                 |                                  |
|-----------------------|-------|-----------------|----------------------------------|
| Corner Length         | 6.17  | ft              | 6' 2"                            |
| Corner Width          | 6.17  | ft              | 6' 2"                            |
| Maximum Corner Height | 2.83  | ft              | 2' 10"                           |
| Volume of SE Corner   | 53.87 | ft <sup>3</sup> | Volume of a Right Angle Triangle |

**Area 4 - Pier Volume**

|                        |        |                 |                      |
|------------------------|--------|-----------------|----------------------|
| Diameter of Pier       | 2.67   | ft              | 32"                  |
| Radius of Pier         | 1.33   | ft              |                      |
| Maximum Height of Pier | 2.83   | ft              | 2' 10"               |
| Volume of Pier         | 15.82  | ft <sup>3</sup> | Volume of a Cylinder |
| Number of Piers        | 18     |                 |                      |
| Total Volumn of Piers  | 284.84 | ft <sup>3</sup> |                      |

**Total Volume**

|                                        |          |                 |                         |
|----------------------------------------|----------|-----------------|-------------------------|
| 1 - 2 - 3 - 4                          | 9,637.98 | ft <sup>3</sup> |                         |
| 7.4805 gal/ft <sup>3</sup>             | 72,097   | gallons         |                         |
| Largest Storage Tank Volume            | 65,000   | gallons         |                         |
| Min. 100% of Largest Tank Volume       | 65,000   | gallons         | 40 CFR 264.193(e)(1)(i) |
| Therefore, Adequate Containment Volume |          |                 |                         |



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## **Attachment V.I**

### **Boilers and Industrial Furnaces**

## **Attachment V.I.1**

### **CCIN-1 Halogen Acid Furnace**

**Attachment V.I.1**

**Boiler and Industrial Furnace Report**

**Halogen Acid Furnace CCIN-1**

**OxyChem**  
**Ingleside, Texas**



10/24/2025

ATLAS TECHNICAL CONSULTANTS LLC  
15740 Park Row Drive, Suite 200  
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TBPE Firm Registration No. - F-19813

Revision 2

## **Attachment V.I.1**

### **Boiler and Industrial Furnace Report**

#### **Halogen Acid Furnace Incinerator CCIN-1**

**OxyChem  
Ingleside, Texas**



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## 1.0 Overview

OxyChem operates two ~~hydrochloric-Halogen aAcid (HCl)-production-f~~ Furnaces (HAFs) (CCIN-1 and CCIN-2) at their Ingleside, Texas facility. The units treat organic wastes from the vinyl chloride monomer (VCM) and ethylene dichloride (EDC) processes. CCIN-1 and CCIN-2 were originally permitted under the Boiler and Industrial Furnace (BIF) standards in 40 CFR Part 266 Subpart H. The units then became subject to the Hazardous Waste Combustor (HWC) Maximum Achievable Control Technology (MACT) standards as ~~HAFs Cl-production-furnaces~~ pursuant to the regulations specified in 40 CFR Part 63 Subpart EEE. CCIN-1 and CCIN-2 subsequently demonstrated compliance with the HWC MACT standards during a comprehensive performance test. Pursuant to 30 TAC 305.571(b), existing ~~HAFs Cl-production-furnaces~~ that have demonstrated compliance with the HWC MACT standards are not subject to the permitting and trial burn requirements of 30 TAC 305 Subchapter Q unless otherwise required by the Agency.

This BIF report has been developed as a part of OxyChem's RCRA Part B permit application for ~~HAF -Incinerator~~ CCIN-1 if permitting is required by the Agency. This report is designed to demonstrate compliance with the applicable HWC MACT performance standards of 40 CFR Part 63, Subpart EEE. These performance standards include:

- 99.99% destruction and removal efficiency (DRE) of principal organic hazardous constituents (POHC);
- Control of hydrogen chloride (HCl) and chlorine gas emissions combined to 150 ppmv, expressed as chloride (Cl<sup>-</sup>) equivalent, dry basis (corrected to 7% oxygen);
- Control of particulate matter (PM) emissions based on complying with the HCl and chlorine gas standard;
- Control of mercury emissions based on complying with the HCl and chlorine gas standard;
- Control of combined semivolatile metal (Cd and Pb) emissions based on complying with the HCl and chlorine gas standard;
- Control of combined low-volatility metals (As, Be, and Cr) emissions based on complying with the HCl and chlorine gas standard;
- Control of carbon monoxide emissions to 100 ppmv or less on an hourly rolling average (HRA) dry basis (corrected to 7% oxygen);
- Control of total hydrocarbons emissions to 10 ppmv or less on an HRA dry basis (corrected to 7% oxygen); and
- Control of dioxin/furan emissions based on complying with either the carbon monoxide or hydrocarbon emission standard.

OxyChem prepared a comprehensive performance test (CPT) plan under the Hazardous Waste

Combustor MACT for the initial CPT test. That plan was reviewed by EPA, implemented, and results reported to EPA to demonstrate compliance. Via letter dated July 1, 2014, EPA accepted the notice of compliance and CPT report and concluded that it demonstrated compliance with 40 CFR Part 63, Subpart EEE. All limits were incorporated into OxyChem's air permit authorizing emissions from the ~~HAF incinerator~~. Accordingly, no additional trial burn/CPT information is presented in this application.

## 1.1 Organization of ~~Incinerator~~ Report

This ~~incinerator~~ report is organized as follows:

- Section 1 - Overview (Overview of performance standards and waste treatment process);
- Section 2 - Wastes to be Treated;
- Section 3 - Description; and
- Section 4 - References.

## 1.2 Waste Treatment System Process and Feed Descriptions

The facility site plan showing the location of the unit is illustrated on Drawing 9D-00A-900 in Appendix A Figure 4.

~~HAF Incinerator~~ CCIN-1 consists of three primary process areas:

1. ~~Furnace; Incinerator;~~
2. HCl Absorber; and
3. Air Pollution Control System (APCS).

The ~~furnace incinerator~~ consists of a firebox followed by a flue gas cooler/waste heat boiler, which is designed to destroy greater than 99.99% of hazardous organic constituents in the feed streams and to produce plant steam. The HCl recovery unit produces acid which can be used on-site for pH control in the VCM process and wastewater treatment systems. The APCS originally consisted of a two-column scrubber system followed by a knock-out drum.

Modifications were made to the APCS to incorporate two additional components: a wet electrostatic precipitator (WESP) and a catalytic oxidizer. These enabled OxyChem to meet the HWC MACT performance standards.

The basic flow of materials through the combustion ~~incineration~~ system, ~~in its prior configuration,~~ is illustrated on Drawing 5D-B-010 in Figure 2 and Appendix A. ~~The flow as it~~



~~now occurs through the modified system is illustrated in Figure 3 and Appendix A.~~ Descriptions of the discrete components follow in this section, and Section 3 provides a more detailed description of OxyChem's ~~combustion incineration~~ system.

### 1.2.1 Waste Storage

All of the liquid hazardous wastes and vent streams treated in the ~~HAF incinerator~~ are generated on-site or off-site at other OxyChem facilities. Prior to being pumped to the ~~HAF incinerator~~ for treatment, these process wastes are stored in RCRA-permitted tanks (C-720A and C-7208). Hazardous waste oil and "mother liquor" may occasionally be blended into either tank prior to ~~combustion incineration~~.

In addition, vents from these two RCRA tanks, vents from other tanks in the EDC and VCM storage areas, as well as vents in the EDC, VCM, and Plant 2 process areas are also routed to the ~~HAF incinerator~~ for treatment.

Since wastes from the EDC and VCM production processes are of consistent composition, there is not a need to test each tank prior to treatment in the ~~HAF incinerator~~. Periodic sampling and analysis of waste feed streams takes place as described in the facility Waste Analysis Plan.

Based on process and storage needs, wastes are pumped from each tank independently to the ~~HAF incinerator~~.

### 1.2.2 ~~Combustion Incineration~~ System

The CCIN-1 and CCIN-2 ~~HAFs incinerators~~ are identical and were designed and fabricated by Bigelow-Liptak Corporation. The units operate in a horizontal flow configuration and have demonstrated 99.99% DRE of organic constituents. The size, burner capacity, and thermal capacity of the unit is provided in Section 3.0. ~~Drawing 5D-00-A-500 in~~ Appendix A provides ~~a the~~ plot plan for ~~the~~ CCIN-1 ~~and CCIN-2 HAFs~~.

Organic wastes, vent gases, and natural gas are fed as fuel along with combustion air and atomizing steam into the feed end of the ~~incinerator~~ firebox. Originally, the ~~HAF incinerator~~ utilized a single induced draft (ID) fan to provide motive force to transport the combustion gas through the ~~combustor incinerator~~. As part of the modifications made for HWC MACT, an additional ID fan was added following the APCS to assist in this function.

Combustion gases in excess of 1700 °F enter the waste heat boiler from the ~~HAF~~incinerator, which generates process steam for on-site use.

### 1.2.3 HCl Absorber

The ~~furnace incinerator~~ is followed by an absorber system which removes HCl from the combustion gases.

### 1.2.4 Air Pollution Control System (APCS)

Combustion gases from the ~~furnace incinerator~~, waste heat boiler, and HCl absorber are treated to remove particulate matter, trace metals, chlorine, and dioxins prior to being emitted to the atmosphere. The APCS originally had the following major components:

- Dehumidifier and caustic scrubber; and
- Knock-out drum.

After modifications were made for HWC MACT compliance, the APCS now also includes downstream of the knock-out drum the following components:

- WESP; and
- Catalytic oxidizer.

Combustion gas is vented to the atmosphere through a 125-ft stack, which was also installed as part of the APCS modifications.

More complete information on the APCS is provided in Section 3.9.

### 1.2.5 Blowdown Treatment

The APCS blowdown is routed to the plant waste water treatment system. The blowdown normally contains total dissolved solids (TDS) and total suspended solids (TSS).

## 2.0 Wastes Treated

In the EDC and VCM processes OxyChem generates five separate hazardous organic waste streams that may be treated through ~~combustion in the HAF~~incineration, which are as follows:

- VCM plant light ends;
- VCM plant heavy ends;
- EDC plant heavy ends;
- Mother liquor; and
- Hazardous waste oil.

Table 2-1 lists the characteristics of these waste streams.

OxyChem does not produce or handle any products containing polychlorinated biphenyls (PCB) that could be regulated under the Toxic Substance Control Act (TSCA). OxyChem does not generate any waste materials that are designated as F020, F021, F022, F023, F026, or F027 wastes (dioxin waste codes). Non-pumpable waste streams are not fed to the ~~furnace~~incinerator.

The wastes that are burned in the ~~furnace~~incinerator are generated continuously in the VCM and EDC processes. The composition of the organic wastes does not vary significantly over time. In addition, the characteristics of the organic wastes generated in the VCM and EDC processes have similarities.

Refer to the Waste Analysis Plan for additional information on the wastes. OxyChem has explored and continues to look for additional ways to recover and reuse as much of its wastes as is practicable. Prior to being sent to tanks C-720A and C-720B, reaction byproducts undergo numerous recovery and separation stages at the individual processes to recover product, raw materials, and solvents.

### 3.0 Unit Description

The following sections provide a detailed description of the ~~HAF incineration~~ system. A complete set of process flow diagrams (PFDs) and equipment arrangements are provided as Appendix A. The design parameters for major components of the ~~combustor incinerator system~~ are summarized in Table 3-1. ~~System flow diagrams for the pre-MACT systems are provided in Appendix A, and diagrams for the modified, post-MACT systems are also provided in Appendix A.~~ The ~~combustor incineration system's~~ ~~equipment engineering~~ drawings (Appendix A) and specifications were prepared by OxyChem engineering.

#### 3.1 Description of ~~HAF Incinerator~~

The ~~combustion incinerator~~ system consists of the firebox (combustion zone) and the waste heat boiler. The ~~furnace incinerator~~ and waste heat boiler are oriented to each other as shown in ~~Drawing 5D-00-A-500 in Appendix A Figure 3.~~

##### 3.1.1 Combustion Zone

Combustion of organics takes place in the firebox. The firebox was fabricated by Bigelow-Liptak Corporation with the dimensions presented in Table 3-1. The design has no model number.

The firebox is made of carbon steel and designed for 34 million Btu/hr heat release.

The firebox has field-installed refractory consisting of 7 to 9 inches of firebrick. The unit is designed for a maximum operating temperature of 2,400 °F. The temperature is automatically controlled by reducing excess combustion air and/or the addition of natural gas to maintain a temperature greater than 1,700 °F.

The temperature is measured with a thermocouple at the exit of the combustion chamber. Interlocks are installed to initiate an emergency shutdown of the ~~furnace incinerator~~ should temperatures in excess of 2400 °F be experienced. Conversely, waste liquid feed is automatically cut-off if the temperature falls below the permitted minimum. Firing controls for CCIN-1 are shown in Appendix A.

##### 3.1.2 Waste Heat Boiler

Hot combustion gases at approximately 1,700 - 2,400 °F pass from the firebox through a 6-foot 9-



inch inner-diameter, refractory-lined duct to the flue gas cooler. The flue gas cooler is a fire-tube, waste-heat boiler that is made of carbon steel with refractory on the inlet channel and upstream tube sheet. The unit has a design heat duty of 29.3 million Btu/hr and generates 28,300 lb/hr of 250 psig steam. Combustion gases exit the cooler at approximately 400°F.

The waste heat boiler and steam drum are shown in Appendix A.

### 3.2 Nozzle and Burner Design

Liquid organic waste is fed into the firebox through a single-burner assembly consisting of four waste-liquid injection guns, seven vent-gas nozzles, a spark-ignited pilot, and a single natural gas burner for auxiliary fuel.

Normally, only one or two waste liquid injection nozzles are used at a time for the ~~furnace incinerator~~. The liquid feed flow rate is monitored and automatically controlled. Waste atomization is achieved by the addition of steam to each of the injection nozzles.

Downstream of the vent flow meter, the vent header enters an 8-inch diameter, Teflon-lined, bustle ring. Vent gases pass from the bustle ring into the firebox burner assembly through seven, 2.5-inch diameter vent nozzles located around the outer circumference of the burner assembly.

The pilot, which is always on during normal operation, is a Maxon premix type with a spark igniter.

Combustion air is supplied directly into the burner unit through a 2-foot square inlet, which is mounted vertically behind the burner.

### 3.3 Description of the Auxiliary Fuel Systems

Drawings in Appendix A show the fuel train for the ~~combustion incinerator~~ system. Natural gas is the only support fuel used for the ~~furnace incinerator~~. Up to 20 MMBtu/hr of natural gas can be fired through a single burner. The flow of natural gas is varied to control the firebox temperature.

### 3.4 Capacity of Prime Mover

Combustion air is drawn into the combustion chamber by the action of an induced-draft fan, located downstream of the caustic scrubber. With the added HWC MACT equipment, air flow is also maintained by a second induced-draft fan located downstream of the catalytic oxidizer. The

materials of construction for these fans are listed in Table 3-1.

Air is introduced to the burner through a screened vent, and air flow is controlled by the temperature control damper, which is upstream of the acid absorber.

Under normal operation, air flow is adjusted to maintain temperature, and natural gas is adjusted to maintain minimum temperature. However, if there are still insufficient heat releases, air flow may be reduced, as needed, to maintain firebox temperature. When firing little or no liquid waste, natural gas flow may be maximized. A mechanical stop on the damper prevents it from reducing air flow below a level that would maintain combustion at about 40% of the design rate. This minimum air flow rate corresponds to the maximum fuel gas rate.

A small amount of air is introduced into the pilot line by a Maxon premix blower. The blower is made of carbon steel and has an associated motor.

### 3.5 Description of Waste Feed Systems

There are three primary liquid hazardous waste streams that are destroyed in the ~~HAF incinerator~~: VCM plant heavy ends (VCM HE), VCM plant light ends (VCM LE), and EDC plant heavy ends (EDC HE). The VCM HE and VCM LE are generated as a result of VCM production. EDC HE is generated at the EDC plant. Also, hazardous waste oil and mother liquor are occasionally generated. These two streams are blended with the other waste streams prior to ~~combustion incineration~~.

The heavy ends normally are ~~combusted incinerated~~ separately from the light ends. However, it is possible that they may occasionally be combined into one stream.

#### 3.5.1 Liquid Wastes Delivery

The flow of liquid feeds to the ~~furnace incinerator~~ is continuously monitored and recorded. The feed line is equipped with a mass flow meter and an automatic waste feed cut-off valve. The waste liquid feed flowrate is set manually, but the temperature controller can automatically override the liquid waste feed controller and reduce the liquid waste feed to maintain the firebox temperature below a temperature necessary for equipment safety.

Downstream of the flow monitor, the liquid waste feed line is connected to a header. The ~~furnace incinerator~~ includes four liquid waste burners that receive feed from this header. Each

burner is atomized with steam. Typically, only one or two burners are in operation at a time. A description of the burner nozzles is presented in Section 3.2.

### **VCM Plant Heavy Ends**

The VCM HE is pumped from a 65,000 gallon RCRA permitted storage tank to the burner unit. The VCM HE delivery pump is a centrifugal pump. Average production rate of the VCM HE is 6,400 lb/hour.

### **VCM Plant Light Ends**

The VCM LE is pumped at ambient temperature from a 65,000 gallon RCRA permitted storage tank. The delivery pump is a centrifugal pump. Average production rate of the VCM LE is about 1,000 lb/hr.

### **EDC Plant Heavy Ends**

The EDC HE, which is generated at a rate of approximately 140 lb/hr, is transferred to one of the 65,000 gallon RCRA permitted tanks to the ~~HAF~~ incinerator.

### **Waste Oil**

Waste oil is periodically generated at different areas within the plant and is normally disposed of off-site. However, it may be collected and blended into one of the RCRA-permitted tanks.

### **Mother Liquor**

Mother liquor is periodically generated at different areas within the plant, and is normally disposed of off-site. However, it may be collected and blended into one of the RCRA-permitted tanks.

## **3.5.2 Vent Gases**

Process vent gases are collected in a 10-inch Teflon-lined header. Entrained liquid is removed in a knock-pot before the header splits to the ~~furnace~~ incinerator. The split between the two ~~HAFs~~ incinerators (CCIN-1 and CCIN-2) is adjusted by a manual loading valve in the feed line. Vent flow is metered and monitored in the control room. Average vent flow is typically about 500 SCFM to the unit. Nitrogen is automatically added to maintain a minimum vent flow of 300 SCFM to prevent a flashback in the vent line.

## **3.6 Fugitives Control**

The ~~HAF incinerator~~ operates under an induced draft from the fans, which maintains a negative pressure. The feed of liquid waste is automatically cut-off if the pressure in the firebox is greater than or equal to atmospheric pressure.

### 3.7 Description of Automatic Waste Feed Cutoff System

The automatic waste feed cutoff (AWFCO) system interlocks to prevent feeding liquid hazardous waste if ~~the HAF operating incineration~~ conditions are outside the RCRA permit limits. The AWFCO system resides in the distributed control system (DCS). During startup and shutdown of the ~~HAF incinerator~~ or during process upsets, the interlock system automatically stops hazardous liquid waste feed systems and prevents their restart until the ~~HAF incinerator~~ is at proper operating conditions, and the interlock is reset by the DCS operator. The process controller adjusts auxiliary fuel feed (natural gas) to the waste burners upon any AWFCO event in order to maintain the firebox temperatures.

Descriptions of process monitoring instruments that are interlocked with the AWFCO system under the RCRA permit and their instrument ranges are included in Section 3.12. OxyChem's RCRA Part B permit requires the AWFCO system and associated alarms that would initiate the cut-off to be tested at least weekly to verify operability. To clarify this it says, "All associated alarm test circuits shall be activated to demonstrate circuit continuity." The DCS performs the test for all the alarm circuits almost continuously.

Alarm checking is a task performed within the DCS. When an alarm point is reached, the programmable logic controller (PLC), which hosts the emergency shutdown system functions including waste feed cutoff valves, firebox burner management, etc., will first initiate any interlock actions that may be required. Then the PLC will send the "shutdown alarm" signal along the universal control networks (UCN) to the network interface module (NIM). Any process alarms are sent from the high performance process manager (HPM), which hosts functions such as PID control, valve outputs, etc., to the NIM. The NIM then assigns an alarm priority and sends out the alarm on the local control network (LCN) to any and all devices that need the information. The universal station (operator station) will receive the alarm signal and notify the operator by sounding an audible alarm and a LED indication light for the unit with the alarm.

Alarm management at this point is very similar to the analog alarm annunciator boards. The operator can silence the alarm and then acknowledge the alarm.



The alarm circuit path described above is continuously checked through extensive diagnostic programs on several computer devices. If a failure is found, as stated above, an alarm is sent to the operator immediately and, where appropriate, the system takes action to avert a problem that may be caused by the malfunction. On a weekly basis, this system is monitored at the universal station.

For greater detail of the DCS and circuit continuity checks, see Appendix B, which details procedures for testing alarm operability.

### 3.7.1 Emergency Shutdown Procedures

The emergency shutdown system consists of instrumentation that is designed to keep the ~~HAF incinerator system~~ from operating at conditions that could endanger personnel, damage the ~~incinerator~~ equipment, or lead to unacceptable emissions to the atmosphere. Three types of actions may result from operating conditions deviating beyond pre-defined limits. These actions are: 1) total system shutdown; 2) total flame shutdown; and 3) waste liquid feed cutoff. The ~~HAF operating incinerator~~ conditions that lead to the three types of emergency actions are described below.

#### 3.7.1.1 Total Shutdown

A total shutdown automatically terminates all burning in the firebox. The waste liquid, vent gases, and natural gas are shut off to the firebox. In addition, the induced draft fan and pilot premix blower are both shutdown. The following conditions cause a total shutdown:

| Total System Shutdown Parameter  | Cut-Off Limit/Condition |
|----------------------------------|-------------------------|
| Low steam drum level             | 10%                     |
| High absorber bottom temperature | 200 °F                  |
| High absorber liquid level       | 90%                     |

#### 3.7.1.2 Total Flame Shutdown

A total flame shutdown automatically terminates all burning in the firebox. The waste liquid, vent gases, and natural gas are shut off to the firebox. The induced draft fan and pilot premix blower continue running to purge the system of any corrosive and combustible material. The following conditions cause a total flame shutdown.

| Total Flame Shutdown Parameter | Cut-Off Limit/Condition |
|--------------------------------|-------------------------|
|--------------------------------|-------------------------|

|                                        |              |
|----------------------------------------|--------------|
| High natural gas pressure <sup>a</sup> | 25 psig      |
| Low natural gas pressure <sup>a</sup>  | 5 psig       |
| High pilot gas pressure                | 9" water     |
| Low pilot gas pressure                 | 3" water     |
| Low pilot mixer pressure drop          | 2" water     |
| Low blower suction draft               | 10" water    |
| Low firebox draft                      | -0.05" water |
| High firebox temperature               | 2,400 °F     |
| Loss of flame detection                | Absence      |

a – In this case, vents and liquid waste are shut off, but the pilot gas continues to operate.

### 3.7.1.3 Waste Liquid Feed Cutoff

Hazardous waste liquid feed to the firebox is automatically shut off due to the conditions detailed below. The ~~HAF incinerator~~ continues to run on natural gas to ~~combust incinerate~~ vent gases. These limits and conditions reflect AWFCO requirements for the OxyChem hazardous waste ~~HAF incinerator~~.

| Automatic Waste Feed Cutoff Parameter       | Cut-Off Limit/Condition                                    |
|---------------------------------------------|------------------------------------------------------------|
| Low Firebox Temperature                     | < 1,787 °F (Hourly Rolling Average)                        |
| Maximum Liquid Waste Feed Rate              | > 5,815 lb/hr (Hourly Rolling Average)                     |
| Maximum Chloride Feed Rate                  | > 3,574 lb/hr (12-Hourly Rolling Average)                  |
| Minimum Caustic Scrubber Liquid to Gas Flow | < 12.44 gpm/kscfm (Hourly Rolling Average)                 |
| Minimum Caustic Scrubber Recycle pH         | < 8.91 (Hourly Rolling Average)                            |
| Maximum Stack Gas Flow                      | > 21.63 kscfm (Hourly Rolling Average)                     |
| Maximum Combustion Chamber Pressure         | > 0 in. wc (Instantaneous)                                 |
| Maximum Stack Gas CO Concentration          | ≥ 100 ppm dry @ 7% O <sub>2</sub> (Hourly Rolling Average) |
| Minimum Waste Atomization Steam Pressure    | < 64 psig (Instantaneous)                                  |
| Minimum Caustic Scrubber Recycle Pressure   | < 7.0 (Hourly Rolling Average)                             |

In addition, the waste feed cut-off system activates under any of the following conditions:

- Electrical power outage;
- Liquid injection system flame-out;

- Loss of flame in the combustion chamber;
- Loss of instrument air;
- Shutdown of main induced draft fan;
- Loss of waste atomizing fluid;
- Loss of combustion air;
- Failure of computer monitoring system; or
- Malfunction of pollution control system.

Final AWFCO parameter values for permitted operation under 40 CFR Part 63 Subpart EEE and additional State of Texas requirements are expected to be negotiated between the TCEQ and OxyChem based on the results of subsequent CPT tests.

### **3.8 Stack Gas Monitoring**

Continuous emissions monitoring systems (CEMS) are used to monitor stack gases continuously for carbon monoxide and oxygen concentrations. Continuous emissions monitor ranges are listed in Table 3-2.

The CO and O<sub>2</sub> CEMS meet all of the performance specifications detailed in 40 CFR Part 60, Appendix B, Performance Specification 4B and the data analysis and recording requirements in 40 CFR Sections 63.8(c)(4) and 63.8(g). Dedicated sample ports for the CEMS probes are located in the stack.

If any CEM system ceases to operate correctly, or if a zero and span procedure for an analyzer exceeds 20 minutes in duration, the liquid waste feed must be cut-off.

### **3.9 HCl Absorber**

The HCl absorber is designed primarily to recover HCl from the combustion gases for reuse in other processes at the plant. The HCl absorber is a packed column constructed of rubber-lined carbon steel covered with an acid-brick lining. The dimensions of the absorber are included in Table 3-1.

Gases from the waste-heat boiler are introduced into the absorption column through a 47-inch inner-diameter inlet that is lined with refractory. Water from the plant and occasionally blowdown from the dehumidifier are introduced at the top of the column, immediately cooling the combustion gases to about 150 °F in this section.

Water is pumped from the bottom of the column. The acid is normally recycled to the quench section and to the lower bed. Excess acid from the bottom of the column is cooled in a graphite cooler and used on-site for pH control in the VCM process and wastewater treatment system.

Excess acid is neutralized with limestone, caustic, or other alkaline streams in the plant's wastewater treatment system. A drawing showing the HCl absorber unit for CCIN-1 is provided in Appendix A.

### **3.10 Air Pollution Control System Equipment**

#### **3.10.1 Overview**

As described in Section 3.0, the APCS originally had the following major components:

- Dehumidifier and caustic scrubber; and
- Knock-out drum.

After modifications made for HWC MACT compliance, the APCS now includes the following components located downstream of the knock-out drum:

- WESP; and
- Catalytic oxidizer.

Combustion gas is vented to the atmosphere through a 125-ft stack.

#### **3.10.2 Dehumidifier and Caustic Scrubber**

Gases exiting the HCl recovery system enter the first of two spray scrubber columns (a dehumidifier column), which is followed by a caustic scrubber column. Dimensions and materials of construction for the unit are included in Table 3-1. A drawing showing the scrubber for CCIN-1 is provided in Appendix A.

Gases (at approximately 149°F) from the HCl recovery system are introduced at the top of the dehumidifier column. Gases are cooled to about 113 °F and are dehumidified by co-current direct contact with water that is recycled from the caustic scrubber. Sodium hydroxide is added to maintain the pH of the scrubbing water above 8 and absorb chlorine and HCl from the flue gases. Sodium thiosulfate or sodium bisulfite is injected into the scrubbing water to complete conversion of the Cl<sub>2</sub> to chloride. The average flow rate of water to the dehumidifier



is 700 gpm. Dehumidifier bottoms are cooled to 100 °F and recycled to the caustic scrubber. A small amount of blowdown is removed from the scrubber to purge salts from the scrubbing water system. Softened water is added to the caustic scrubber on level control to make up for blowdown losses.

Gases from the dehumidifier pass through a 36-inch diameter FRP pipe to the caustic scrubber. Inside the scrubber, spray nozzles discharge water that consists primarily of cooled bottoms from the dehumidifier column. Similar to the dehumidifier column, sodium hydroxide is added to raise the pH of the scrubbing water above 8.

### **3.10.3 Knock-Out Drum**

The knock-out drum receives combustion gases from the caustic scrubber at approximately 100°F. Dimensions and materials of construction for the knock-out drum are included in Table 3-1. The knock-out drum serves to separate entrained moisture from the combustion gases. The collected water flows by gravity to the caustic scrubber bottoms stream, which is then pumped to the dehumidifier column. A drawing showing these components for CCIN-1 is provided in Appendix A.

### **3.10.4 Wet Electrostatic Precipitator**

The WESP is a device that was installed to remove sub-micron sized PM and metals from the gas stream. The design for the WESP is a down-flow, tubular-component vessel that uses saturated inlet gas as the irrigation medium. Dimensions and materials of construction for the WESP are included in Table 3-1. A drawing showing the flow diagram for the WESP associated with CCIN-1 is provided in Appendix A.

As gases enter the vertical collecting tubes, a high-intensity corona charges the water vapor, PM, and condensed metals. Charged particles and water vapor mist migrate to the collecting tube walls to form the irrigation film draining by gravity down the tube. The corona is produced by a discharge electrode which is centered in each collecting tube.

The WESP is designed for a 95% removal efficiency for particulate matter to meet or exceed the MACT requirements for emissions of semi-volatile metals and low volatile metals.

Periodically, the WESP requires flushing with an external source of water. A WESP wash water tank stores water required for the WESP on CCIN-1. Water from this tank is pumped to the WESP

on a timed basis. Dimensions and materials of construction for the WESP wash water tank are included in Table 3-1.

A separate WESP water drain tank for the WESP is used to collect the flush water from the WESP. The WESP water drain tank is sized to contain two wash cycles assuming no pump out. This water is routed to the waste water treatment system (WWTS). Dimensions and materials of construction for the WESP water drain tank is included in Table 3-1.

### **3.10.5 Heat Exchangers, Preheaters, and Catalytic Oxidizer**

Saturated gas leaving the WESP passes through a steam-heated superheater to raise the temperature from 129 °F to 155 °F, which is above the dew point. Superheated gas then passes through the cold side of the cross exchanger. The cross exchanger is a gas-to-gas heat exchanger that partially preheats feed to the catalytic oxidizer by recovering heat from the stream leaving the catalytic oxidizer.

Gas leaving the cross exchanger is sent to the catalytic oxidizer pre-heater, which is a natural gas fired heater designed to raise the gas above the 420 °F (450 °F used for design) minimum inlet temperature required for the catalytic oxidizer. Approximately 40 scfm of natural gas is required.

The catalytic oxidizer is a vapor phase dioxin/furan (PCDD/F) destruction device based on established selective catalytic reduction (SCR) technology used for NO<sub>x</sub> control. Hot preheated gas is passed through a cubical vessel containing a grid of honeycomb catalyst layers. The catalytic oxidizer is designed to destroy in excess of 96% of the vapor phase PCDD/F based on an inlet of 10 ng/dscm TEQ at 7% O<sub>2</sub> reducing to an outlet concentration of no more than 0.3 ng/dscm TEQ. Treated gases leaving the catalytic oxidizer are sent to the hot side of the cross exchanger to partially preheat incoming feed.

Dimensions and materials of construction for the super heater, cross exchanger, preheater, and catalytic oxidizer, are included in Table 3-1. Drawings for the super heater, cross exchangers, preheater, and catalytic oxidizer are provided in Appendix A.

### **3.10.6 Vent Stack**

Historically, combustion gases from the knock-out drum were drawn into the induced-draft blower and discharged to the vent stack.

As a result of HWC MACT upgrades, treated gases exiting the cross exchanger hot side are sent to the suction of a new ID fan, which provides motive force to pull the gases through the new equipment. The ID fan discharges to a new 3.5 feet diameter stack that is 125 feet tall.

There are two sampling ports located on the new stack, which are located 90 degrees apart from each other and are accessible from a sampling platform. Stack gases are monitored for carbon monoxide and oxygen.

### 3.11 Construction Materials

Construction materials for the ~~HAF incinerator system~~ components are specified in Table 3-1

### 3.12 Location and Description of Temperature, Pressure, and Flow Indicating and Control Devices

Locations of process control instruments are provided in the unit process flow diagrams (Appendix A). This section provides a general description of temperature, pressure, flow, and other instrumentation requirements necessary to ensure compliance with all permit conditions. A discussion of the major controls for the ~~HAF incineration system~~ that are-is linked to the DCS is also provided. There is a separate PLC for burner management that communicates with the DCS. Section 3.7.1.3 presents the parameters that are used to monitor plant operations and record data for the facility operating record and test burns. Instrument calibration is performed according to manufacturer's specifications.

The DCS controls the ~~HAF incineration system~~ operations. A description of the primary control loops follows. AWFCO functions for each control are discussed in Section 3.7.

#### 3.12.1 Waste Feed Rate Control

A mass flow meter in combination with the DCS maintains a continuous record of the hazardous waste feed rate to the ~~furnace incinerator~~. The feed rate of chlorine and ash during operations may be calculated by multiplying this feed rate by the parameter concentration measured following the Waste Analysis Plan.

The total and average heat input values for the feeds to the ~~HAF incinerator~~ are calculated in the DCS by a heat balance around the waste heat boiler.

### **3.12.2 Combustion Chamber Gas Temperature and Burner Controls**

Firebox temperature is controlled by modulating air flow, natural gas flow rate, or the waste to the burners

Thermocouples record combustion temperature in the exit from the firebox. Temperature recorders and temperature indicators in the DCS continuously monitor the process.

Natural gas feed rate to the burner is measured with a vortex meter prior to the feed nozzle. Natural gas pressure (a permitted AWFCO) is measured with an electronic differential pressure transmitter switch.

Atomizing steam pressure, a permitted AWFCO, is measured using a differential pressure transmitter on the steam header to the nozzles.

### **3.12.3 HCl Absorber Packed Bed Inlet Gas Temperature**

Inlet temperature to the HCl absorber packed bed is measured with a thermocouple. Temperature indicators in the DCS continuously monitor the process. If a high temperature is detected, the alarm is activated.

### **3.12.4 Quench Chamber Water Flow Rate**

The flow rate of water to the quench chamber nozzles (a permitted AWFCO) is measured using magmeters or vortex meters on the quench inlet line to the feed nozzles.

### **3.12.5 Scrubber Recycle pH**

The pH of the caustic scrubber recycle liquor is monitored by means of a pH probe in the bottom effluent from the caustic scrubber. Caustic is added, as necessary, to maintain the desired pH.

### **3.12.6 WESP Transformer/Rectifier (T/R) kVA**

The T/R control displays primary and secondary voltage. The control panel sends voltage information to the DCS where the HRA secondary kVA interlock is initiated.



### **3.12.7 Stack Gas Oxygen and Carbon Monoxide Levels**

Stack gas emission levels are measured by means of parameter specific stack gas analyzers as described in Section 3.8.

### **3.13 Combustion Gas Flow Rate**

Combustion gas flow rate is measured with a flow monitor that is mounted on the new exhaust stack.

## 4.0 Closure

A closure plan, which describes the procedures that will be implemented for closure of ~~HAF Incinerator~~ CCIN-1, is provided ~~in Attachment VII.A.4 as Appendix C~~. Historically prepared ~~closure cost estimates, which were reviewed and approved by TCEQ in prior applications,~~ are also provided as part of the closure plan. ~~However, it should be noted that these closure cost estimates were developed using an overly conservative costing assumption that contaminated soils would be present.~~

~~That assumption has not been carried over to the closure cost tables in the Part B application form. Also, at the time of closure, OxyChem intends to use facility personnel and appropriate contractors to perform closure activities with supervision provided by an independent, licensed professional engineer.~~

## 5.0 References

U.S. Environmental Protection Agency (EPA). "Guidance Manual for Hazardous Waste Incinerator Permits." Office of Solid Waste, Washington, D.C. March 1983.

U.S. EPA. "Guidance on Setting Permit Conditions and Reporting Trial Burn Results." Hazardous Waste Incineration Guidance Series, Volume II. Office of Solid Waste. Washington D.C. EPN625/6-89/019. January 1989.

U.S. EPA. "BIF Technical Implementation Document." Washington, D.C. EPA-530-R-92-011. March 1992.

U.S. EPA. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods." Washington, D.C. SW-846. Update III. December 1996.

U.S. EPA. "Protocol for Human Health Risk Assessment at Hazardous Waste Combustion Facilities." EPA-R6-098-002. Center for Combustion Science and Engineering, Multimedia Planning and Permitting Division, U.S. EPA Region 6. Dallas, Texas. January 1998a.

U.S. EPA. "Protocol for Screening Level Ecological Risk Assessment at Hazardous Waste Combustion Facilities." EPA-R6-098-003. Center for Combustion Science and Engineering, Multimedia Planning and Permitting Division, U.S. EPA Region 6. Dallas, Texas. January 1998b.

## Tables



**Table 2-1 Stream Characteristics**

| <b>Component</b>                                                            | <b>VCM<br/>HE</b> | <b>VCM<br/>LE</b> | <b>EDC<br/>HE</b> | <b>Hazardous<br/>Waste Oil</b> | <b>Mother<br/>Liquor</b> |
|-----------------------------------------------------------------------------|-------------------|-------------------|-------------------|--------------------------------|--------------------------|
| <b>Organic Hazardous Air Pollutants (HAPs) Concentration Ranges (wt. %)</b> |                   |                   |                   |                                |                          |
| Vinyl Chloride Monomer                                                      | -                 | 0-5               | -                 | -                              | -                        |
| Carbon Tetrachloride                                                        | -                 | 0-15              | -                 | -                              | -                        |
| Chloroform                                                                  | 0-5               | 0-100             | -                 | -                              | -                        |
| Chloroethane                                                                | -                 | 0-10              | -                 | -                              | -                        |
| 1,1,2,2-Tetrachloroethane                                                   | 5-25              | -                 | -                 | -                              | <1                       |
| Trichloroethylene                                                           | 0-2               | 0-5               | -                 | -                              | <2                       |
| 1,1,1-Trichloroethane                                                       | 0-5               | -                 | -                 | 0-5                            | -                        |
| 1,1,2-Trichloroethane                                                       | 0-90              | -                 | 5-30              | -                              | <1                       |
| 1,1-Dichloroethane                                                          | -                 | 0-30              | -                 | -                              | -                        |
| 1,2-Dichloroethane                                                          | 10-100            | 0-100             | 10-50             | 0-5                            | 40-60                    |
| Chloroprene                                                                 | -                 | 0-15              | -                 | -                              | -                        |
| Tetrachloroethylene                                                         | 0-15              | -                 | 5-25              | -                              | -                        |
| Chlorobenzene                                                               | 0-5               | -                 | -                 | -                              | -                        |
| Hexachlorobenzene                                                           | -                 | -                 | -                 | -                              | <2                       |
| <b>Other Organic Constituents Concentration Ranges (wt. %)</b>              |                   |                   |                   |                                |                          |
| 1,2-Dichloroethylene                                                        | -                 | 0-20              | -                 | -                              | -                        |
| 2-Chloroethanol                                                             | 0-2               | -                 | -                 | -                              | -                        |
| Ethylene                                                                    | -                 | 0-3               | -                 | -                              | -                        |
| Bis(2-chloroethyl)ether                                                     | 0-30              | -                 | 1-5               | -                              | -                        |
| Octachlorocyclopentane                                                      | -                 | -                 | -                 | -                              | <1                       |
| Heptachloropropane/Heptachlorobutene                                        | -                 | -                 | -                 | -                              | <1                       |
| Heavier Compounds <sup>a</sup>                                              | 30-60             | -                 | 25-50             | -                              | 30-60                    |
| Oil                                                                         | -                 | -                 | -                 | >95                            | -                        |
| <b>Maximum Inorganic HAP Concentrations (mg/kg)<sup>b</sup></b>             |                   |                   |                   |                                |                          |
| Arsenic                                                                     | 2                 | 2                 | 2                 | -                              | -                        |
| Cadmium                                                                     | 5                 | 5                 | 1                 | -                              | -                        |
| Chromium                                                                    | 11.3              | 1                 | 1                 | -                              | 10                       |
| Lead                                                                        | 20                | 5                 | 5.3               | -                              | -                        |
| Mercury                                                                     | 0.2               | 0.1               | 0.1               | -                              | -                        |
| Selenium                                                                    | 5                 | 5                 | 1                 | -                              | -                        |
| Hydrochloric Acid                                                           | -                 | -                 | -                 | -                              | <5                       |
| Chlorine                                                                    | 65-90             | 65-90             | 65-90             | <1                             | 65-75                    |

**Table 2-1 Stream Characteristics (continued)**

| <b>Component</b>                                          | <b>VCM<br/>HE</b> | <b>VCM<br/>LE</b> | <b>EDC<br/>HE</b> | <b>Hazardous<br/>Waste Oil</b> | <b>Mother<br/>Liquor</b> |
|-----------------------------------------------------------|-------------------|-------------------|-------------------|--------------------------------|--------------------------|
| <b>Other Inorganic Constituent Concentrations (µg/kg)</b> |                   |                   |                   |                                |                          |
| Zinc                                                      | -                 | -                 | -                 | <10                            | -                        |
| Iron                                                      | -                 | -                 | -                 | -                              | <50,000                  |
| <b>Other Waste Stream Characteristics</b>                 |                   |                   |                   |                                |                          |
| Ash Content (ppm)                                         | 0-1,720           | 0-750             | 0-750             | 4,000-<br>30,000               | 10,000-<br>100,000       |
| Higher Heating Value (Btu/lb)                             | 5,000-<br>6,200   | 5,000-<br>6,500   | 5,000-<br>6,200   | 10,000-<br>20,000              | 5,000-<br>6,000          |
| Average Production Rate (lb/hr)                           | 6,400             | 1,000             | 140               | <sup>c</sup>                   | <sup>c</sup>             |
| Density (lb/gal)                                          | 10-12             | 10-11             | 10-11             | 7.2-7.6                        | 11-12                    |

<sup>a</sup> – Primarily chlorinated butanes and butenes

<sup>b</sup> – Except chlorine, which is presented as a range of weight percents

<sup>c</sup> – Intermittently generated

**Table 3-1 ~~HAF Incinerator~~ Equipment <sup>1</sup>**

|                                                                                                                                                           |                                                                                                                        |                                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| <u>Firebox</u><br>(F-550, F-570) <sup>2</sup><br>30' L x 9'5" H x 8'5" W<br>2,379 ft <sup>3</sup> volume<br>79 ft <sup>2</sup> cross section<br>Firebrick | <u>Caustic Scrubber</u><br>(C-553, C-573) <sup>2</sup><br>6' D x 33'6" H<br>Fiberglass-reinforced plastic (FRP)        | <u>WESP Water Drain Tank</u><br>(D-550, D-570) <sup>2</sup><br>7' D x 8' H<br>2,300 gallons<br>FRP       |
| <u>Flue Gas Cooler</u><br>(E-550, E-570) <sup>2</sup><br>8,230 ft <sup>3</sup><br>29.3 MM Btu/hr<br>406°F/250 psig<br>Carbon steel (CS)                   | <u>Knock-Out Drum</u><br>(C-554, C-574) <sup>2</sup><br>6'10" ID x 10' H<br>FRP                                        | <u>Super Heater</u><br>(E-553, E-573) <sup>2</sup><br>CS/Hastelloy C                                     |
| <u>Waste Heat Boiler Steam Drum</u><br>(C-550, C-570) <sup>2</sup><br>3'6" D x 20' L<br>28,300 lb/hr steam<br>300 psig<br>Carbon steel                    | <u>Vent Draft Blower</u><br>(K-551, K-571) <sup>2</sup><br>17,600 acfm<br>150 HP/1,800 RPM<br>Hastelloy rotor/FRP case | <u>Cross Exchanger</u><br>(E-554, E-574) <sup>2</sup><br>CS/CS                                           |
| <u>Spray Quench</u><br>2 nozzles in-line                                                                                                                  | <u>Vent Stack</u><br>(A-551, A-571) <sup>2</sup><br>3'6" D (at exit) x 125' H<br>Carbon Steel                          | <u>Catalytic Oxidizer Pre-Heater</u><br>(F-551, F-571) <sup>2</sup><br>5.6 MM Btu/hr<br>CS/310 SS        |
| <u>Acid Absorber</u><br>(C-551, C-571) <sup>2</sup><br>7' ID x 48" H total<br>2 packed beds<br>each bed 12' H<br>462 ft <sup>3</sup> /bed                 | <u>WESP Wash Water Tank</u><br>(D-561) <sup>3</sup><br>9' D x 10' H<br>4,700 gallons<br>FRP                            | <u>Catalytic Oxidizer</u><br>(V-550, V-570) <sup>2</sup><br>Carbon Steel                                 |
| <u>Dehumidifier Column</u><br>(C-552, C-572) <sup>2</sup><br>6' D x 33'6" H<br>FRP/polyvinyl chloride (PVC) liner                                         | <u>WESP</u><br>(Y-550, Y-570) <sup>2</sup><br>13' D x 41' H<br>4 x 62 kV Transformer/Rectifiers<br>FRP/Hastelloy C     | <u>Catalytic Oxidizer ID Fan</u><br>(K-554, K-574) <sup>2</sup><br>32,000 acfm<br>450 HP<br>Carbon Steel |

<sup>1</sup>Based on design conditions

<sup>2</sup>The first number designates the unit within the CCIN-1 ~~HAF incinerator~~-system and the second number designates the unit within the CCIN-2 ~~HAF incinerator~~-system

<sup>3</sup>Common to both CCIN-1 and CCIN-2

**Table 3-2      Stack Gas Monitoring Equipment**

| Parameter       | Range                                    |
|-----------------|------------------------------------------|
| Oxygen          | 0-25% v                                  |
| Carbon Monoxide | dual range<br>0-200 ppmv<br>0-3,000 ppmv |



## Figures

## Appendix A

### Equipment Engineering Drawings

Dwg. 9D-00A-900, Rev. 1 – Overall Master Plan

Dwg. 5D-00-A-500, Rev. 14 – Plot Plan – Incinerator Unit – CCIN-1 and CCIN-2

~~Dwg. 5D-B-009, Rev. 7 – VCM Plant Process Flow Diagram~~

Dwg. 5D-B-010, Rev. 5 – Process Flow Sheet – MACT Project - CCIN-1/CCIN-2

~~Dwg. 5D-00-A-500, Rev. 14 – Plot Plan – Incinerator Unit – CCIN-1 and CCIN-2~~

Dwg. 5D-A-021, Rev. 52 – CCIN-1 – Firing Controls

Dwg. 5D-A-022, Rev. 20 – CCIN-1 - Waste Heat Boiler and Steam Drum

Dwg. 5D-A-023, Rev. 32 – CCIN-1 - HCl Absorber and Acid Cooler

Dwg. 5D-A-024, Rev. 22 – CCIN-1 – D/H Column and Caustic Scrubber

Dwg. 5D-A-025, Rev. 22 – CCIN-1 – Knock-Out Drum, Fan, and Stack

Dwg. 5D-A-046, Rev. 2 – CCIN-1/CCIN-2 – WESP Wash Water Tank

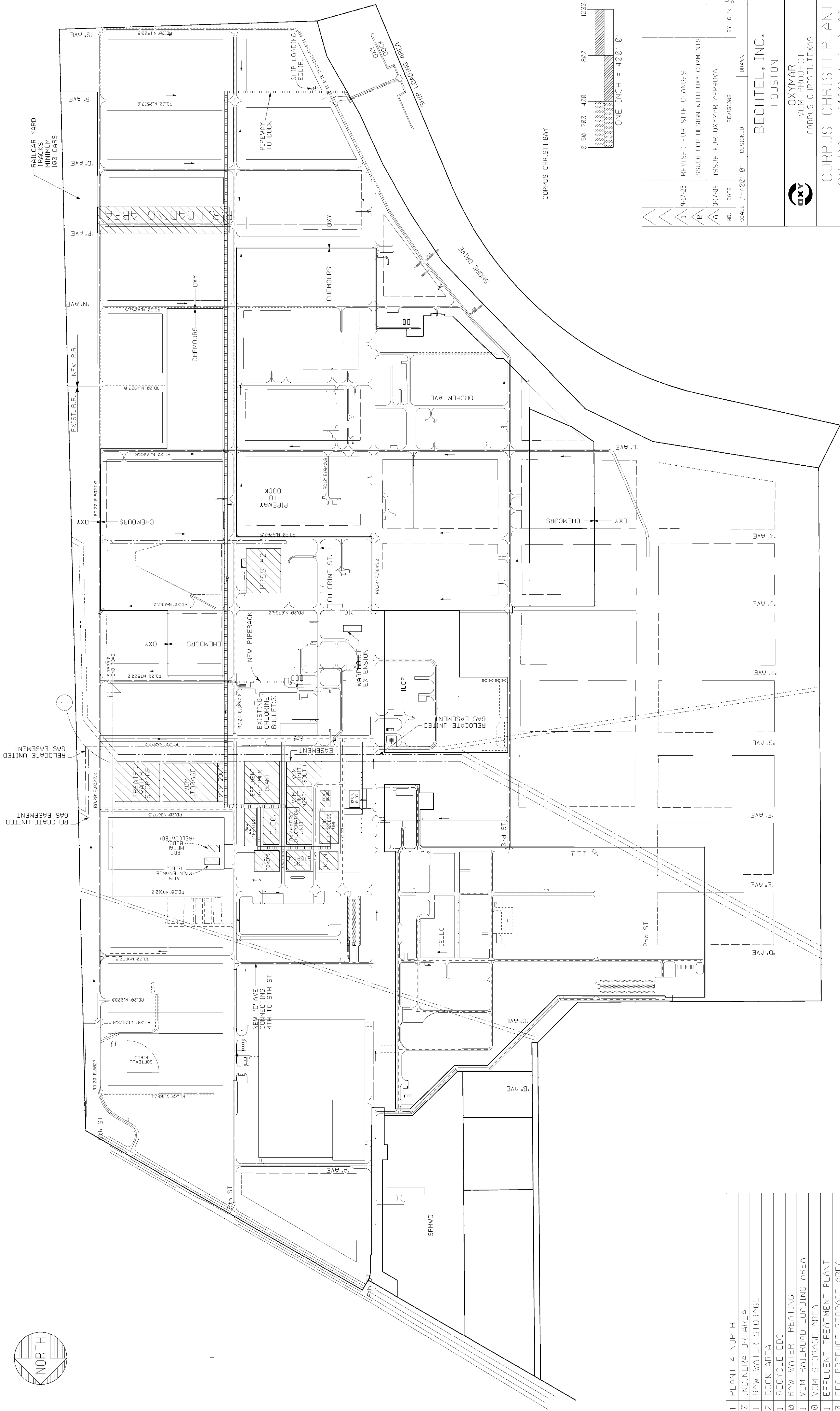
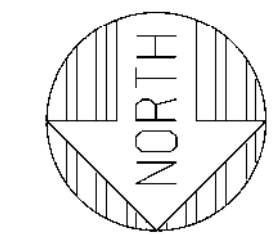
Dwg. 5D-A-047, Rev. 9 – CCIN-1 – WESP

~~Dwg. 5D-A-046, Rev. 2 – WESP Wash Water Tank – CCIN-1/CCIN-2~~

Dwg. 5D-A-048, Rev. 8 – CCIN-1 – Superheater and Catalytic Oxidizer

Dwg. 5D-A-049, Rev. 7 – CCIN-1 – Cat Ox Preheater

Dwg. 5D-A-050, Rev. 11 – CCIN-1 – Cat Ox ID Fan and Stack



|            |                                                |
|------------|------------------------------------------------|
| 40-00A-601 | PLANT & NORTH                                  |
| 50-00A-502 | INCINERATOR AREA                               |
| 60-00A-601 | RAW WATER STORAGE                              |
| 80-02A-802 | DCK AREA                                       |
| 70-00A-701 | RECYLE E CDC                                   |
| 70-02A-620 | RAW WATER TREATING                             |
| 80-02A-801 | VCM RAILROAD LOADING AREA                      |
| 80-02A-800 | VCM STORAGE AREA                               |
| 90-02A-901 | EFLUENT TREATMENT PLANT                        |
| 70-02A-700 | EDC PRODUCT STORAGE AREA                       |
| 20-00A-200 | EDC PROCESS UNIT                               |
| 40-02A-400 | PANTRY 4 SOUTH                                 |
| 30-00A-302 | PANTRY 3 CENTRAL                               |
| 90-02A-921 | PROCESS AREA 400' WIDE, 600' S.E. OF T-RJL AVT |

## REFERENCE DRAWINGS

| HC (I) # | REASON<br>FOR FILING | RT SP.<br>RISK | SCHEDULE<br>RELEASE | ACTUAL<br>RELEASE |
|----------|----------------------|----------------|---------------------|-------------------|
| 1        |                      |                |                     |                   |
|          |                      |                |                     |                   |
|          |                      |                |                     |                   |
|          |                      |                |                     |                   |

| NO. | DATE    | DESIGNED | REVISIONS                           | BY | CHECK | DESIGNED | PROJECT ENGINEER |
|-----|---------|----------|-------------------------------------|----|-------|----------|------------------|
| A   | 9-17-25 |          | REVISED FOR SITE CHANGE.            |    |       |          |                  |
| B   |         |          | ISSUED FOR DESIGN WITH OXY COMMENTS |    |       |          |                  |
| A   | 3-17-89 |          | ISSUED FOR OXYGEN APPROVAL.         |    |       |          |                  |

BECHTEL, INC.  
HOUSTON

OXYMAR  
VCM PROJECT  
CORPUS CHRISTI, TEXAS

CORPUS CHRISTI PLANT  
OVERALL MASTER PLAN

|                                                                                    |           |             |      |
|------------------------------------------------------------------------------------|-----------|-------------|------|
|  | J03 - NC. | CRATING VO. | REV. |
|                                                                                    | '96.1     | 90-004-900  | 1    |



## **Appendix B**

### **Alarm Operability**

## **Introduction**

40 CFR 63.1206(c)(3)(vii) requires the automatic waste feed cut-off (AWFCO) system and associated alarms to be tested at least weekly to verify operability, unless it is documented in the facility operating record that weekly testing unduly restrict or upset operations and that less frequent testing is adequate. However, at a minimum, the AWFCO system and associated alarms must be tested at least monthly. The AWFCO system for the ~~HAF incinerator~~ resides in the distributed control system (DCS). The DCS performs the test for all the alarm circuits almost continuously.

## **DCS Architecture**

The DCS is a digital process control and data acquisition system that consists of standard modular building blocks. The individual blocks are linked together by redundant cable, which comprises universal control networks (UCNs). Each module functionally stands alone to perform its pre-programed tasks. Together the modules provide distributed control and centralized monitoring capabilities so that the operators can recognize and react to situations at all process points in a quick and responsive manner. Built-in automatic diagnostics procedures alert the operator to potential equipment problems, and in many cases, automatically take corrective action to avert the problem.

Two types of modules operate at the process level and are called: 1) high performance process manager (HPM); and 2) Triconics PLC. These devices interface directly with the process measurement devices (e.g., level, flow, pressure, temperature transmitters, etc.). The control functions reside in the HPM (e.g., PID control, valve outputs, etc.). The AWFCO system resides in the Triconics PLC (e.g., waste feed cutoff valves, firebox burner management, etc.). To assure continuous process control, all HPM devices are redundant.

The Triconics is triple redundant to provide fault tolerant operation. Each device monitors the on-line computer and I/O cards continuously for malfunctions. If a malfunction is detected, the operator is notified across the UCN that a problem exists and automatically switches control to the redundant device. Complete control is always maintained.

Both the HPM and Triconics continuously monitor input functions for reasonable values (e.g., module failure, NO converter failure, and PV Range check) and the output functions by a readback check (checks the D/A converter). If a failure is detected, either the HPM or the Triconics will send an alarm to the operator immediately and under certain circumstances it

will automatically switch to the redundant partner. The Triconics also uses three-way voting of the I/O and the processors to provide complete fault tolerant operation. By design, if an output circuit to a control device loses continuity, the control device fails to the fail-safe position. For the liquid feed shutoff valves, this is in the closed position. There are also two valves in series that close to assure positive shutoff.

The HPM communicates with the operator via the UCN. The Triconics communicates through a redundant safety manager onto the same UCN. The UCN consists of two cables connecting all the process devices (HPMs and safety managers) to a network interface module (NIM). All devices on the "highway" continuously check the highway for faults. If a fault is found, the device issues an alarm to the operator and other devices on the highway. All the devices then switch to the redundant cable. To assure that the backup cable does not become damaged while not in use, the data highway automatically switches cables every 5 minutes.

The NIM interfaces the UCN to the local control network (LCN). The LCN is another dual cable data highway that interconnects different devices that are shared between several process networks (e.g., UCNs). For example, operators interface with the process on a universal station. The universal station resides on the LCN. The NIM is a redundant computer module that translates data transmission protocol on the UCN to/from the data transmission protocol on the LCN. The NIM also acts as a "data traffic cop" so that there is orderly data transmission.

Similar to the HPMs, if the active NIM malfunctions, the redundant NIM automatically takes full control of all the other NIM functions and an alarm is sent to the operator.

The LCN is continuously checked for malfunctions by all devices that reside on the LCN. If a device detects a fault on the current cable, it sends out an alarm to the operator and the other devices on the LCN. All devices then switch to the redundant cable. To assure that the backup cable does not become damaged while not in use, the LCN switches cables every 1 minute.

The operator views the process data on a universal station. All alarms are also received at this station. The VCM control room has multiple universal stations to provide sufficient access to the process and redundancy for the stations. Multiple stations are dedicated to the control of the area with the ~~HAFs~~ incinerators.

## **Alarm Checking**

Alarm checking is a task for the Triconics for shutdowns and the HPM for process alarms. When an alarm point is reached, the Triconics will first initiate any interlock actions that may be required. Then the Triconics will send the shutdown alarm signal along the UCN to the NIM. Any process alarms are sent from the HPM to the NIM. The NIM then assigns an alarm priority and sends out the alarm on the LCN to any and all devices that need the information. The universal station will receive the alarm signal and notify the operator by sounding an audible alarm and a LED indication light for the unit with the alarm. Alarm management at this point is very similar to the analog alarm annunciator boards. The operator can silence the alarm and then acknowledge the alarm.

## **AWFCO System Weekly Test Plan**

The alarm circuit path described above is continuously checked through extensive diagnostic programs on several computer devices. If a failure is found, as stated above, an alarm is sent to the operator immediately and, where appropriate, the system takes action to avert a problem that may be caused by the malfunction. On a weekly basis, this system is monitored at the universal station. The system status menu provides the status of each device on the UCN and LCN.

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- 2 Honeywell, Reference: System Summary -2 Volume TPS 3010-2, High Performance Process Manager Specification and Technical Data, Publication HP03-500, 1999.
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- 4 Triconics, Reference: Tricon Planning & Installation Guide, 1998.



## ~~Appendix C~~

## ~~Closure Plan~~

## **Attachment V.I.2**

### **CCIN-2 Halogen Acid Furnace**

**Attachment V.I.2**

**Boiler and Industrial Furnace Report**

**Halogen Acid Furnace CCIN-2**

**OxyChem**  
**Ingleside, Texas**



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## **Attachment V.I.2**

### **Boiler and Industrial Furnace Report**

#### **Halogen Acid Furnace Incinerator CCIN-2**

**OxyChem  
Ingleside, Texas**



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## 1.0 Overview

OxyChem operates two ~~Halogen Acid hydrochloric acid (HCl) production~~ Furnaces (HAFs) (CCIN-1 and CCIN-2) at their Ingleside, Texas facility. The units treat organic wastes from the vinyl chloride monomer (VCM) and ethylene dichloride (EDC) processes. CCIN-1 and CCIN-2 were originally permitted under the Boiler and Industrial Furnace (BIF) standards in 40 CFR Part 266 Subpart H. The units then became subject to the Hazardous Waste Combustor (HWC) Maximum Achievable Control Technology (MACT) standards as ~~HAFs Cl-production furnaces~~ pursuant to the regulations specified in 40 CFR Part 63 Subpart EEE. CCIN-1 and CCIN-2 subsequently demonstrated compliance with the HWC MACT standards during a comprehensive performance test. Pursuant to 30 TAC 305.571(b), existing ~~HAFs Cl-production furnaces~~ that have demonstrated compliance with the HWC MACT standards are not subject to the permitting and trial burn requirements of 30 TAC 305 Subchapter Q unless otherwise required by the Agency.

This BIF report has been developed as a part of OxyChem's RCRA Part B permit application for ~~HAF Incinerator~~ CCIN-2 if permitting is required by the Agency. This report is designed to demonstrate compliance with the applicable HWC MACT performance standards of 40 CFR Part 63, Subpart EEE. These performance standards include:

- 99.99% destruction and removal efficiency (DRE) of principal organic hazardous constituents (POHC);
- Control of hydrogen chloride (HCl) and chlorine gas emissions combined to 150 ppmv, expressed as chloride (Cl<sup>-</sup>) equivalent, dry basis (corrected to 7% oxygen);
- Control of particulate matter (PM) emissions based on complying with the HCl and chlorine gas standard;
- Control of mercury emissions based on complying with the HCl and chlorine gas standard;
- Control of combined semivolatile metal (Cd and Pb) emissions based on complying with the HCl and chlorine gas standard;
- Control of combined low-volatility metals (As, Be, and Cr) emissions based on complying with the HCl and chlorine gas standard;
- Control of carbon monoxide emissions to 100 ppmv or less on an hourly rolling average (HRA) dry basis (corrected to 7% oxygen);
- Control of total hydrocarbons emissions to 10 ppmv or less on an HRA dry basis (corrected to 7% oxygen); and
- Control of dioxin/furan emissions based on complying with either the carbon monoxide or hydrocarbon emission standard.

OxyChem prepared a comprehensive performance test (CPT) plan under the Hazardous Waste

Combustor MACT for the initial CPT test. That plan was reviewed by EPA, implemented, and results reported to EPA to demonstrate compliance. Via letter dated July 1, 2014, EPA accepted the notice of compliance and CPT report and concluded that it demonstrated compliance with 40 CFR Part 63, Subpart EEE. All limits were incorporated into OxyChem's air permit authorizing emissions from the ~~HAF-incinerator~~. Accordingly, no additional trial burn/CPT information is presented in this application.

## 1.1 Organization of ~~Incinerator~~ Report

This ~~incinerator~~ report is organized as follows:

- Section 1 - Overview (Overview of performance standards and waste treatment process);
- Section 2 - Wastes to be Treated;
- Section 3 - Description; and
- Section 4 - References.

## 1.2 Waste Treatment System Process and Feed Descriptions

The facility site plan showing the location of the unit is illustrated on Drawing 9D-00A-900 in Appendix A ~~Figure 1~~.

~~HAF Incinerator~~ CCIN-2 consists of three primary process areas:

1. ~~Furnace; Incinerator;~~
2. HCl Absorber; and
3. Air Pollution Control System (APCS).

The ~~furnace-incinerator~~ consists of a firebox followed by a flue gas cooler/waste heat boiler, which is designed to destroy greater than 99.99% of hazardous organic constituents in the feed streams and to produce plant steam. The HCl recovery unit produces acid which can be used on-site for pH control in the VCM process and wastewater treatment systems. The APCS originally consisted of a two-column scrubber system followed by a knock-out drum.

Modifications were made to the APCS to incorporate two additional components: a wet electrostatic precipitator (WESP) and a catalytic oxidizer. These enabled OxyChem to meet the HWC MACT performance standards.

The basic flow of materials through the ~~combustion-incineration~~ system, ~~in its prior configuration~~, is illustrated on Drawing 5D-B-010 in Figure 2 and Appendix A. ~~The flow as it~~



~~now occurs through the modified system is illustrated in Figure 3 and Appendix A.~~ Descriptions of the discrete components follow in this section, and Section 3 provides a more detailed description of OxyChem's ~~combustion-incineration~~ system.

### 1.2.1 Waste Storage

All of the liquid hazardous wastes and vent streams treated in the ~~HAF incinerator~~ are generated on-site or off-site at other OxyChem facilities. Prior to being pumped to the ~~HAF incinerator~~ for treatment, these process wastes are stored in RCRA-permitted tanks (C-720A and C-7208). Hazardous waste oil and "mother liquor" may occasionally be blended into either tank prior to ~~combustion-incineration~~.

In addition, vents from these two RCRA tanks, vents from other tanks in the EDC and VCM storage areas, as well as vents in the EDC, VCM, and Plant 2 process areas are also routed to the ~~HAF incinerator~~ for treatment.

Since wastes from the EDC and VCM production processes are of consistent composition, there is not a need to test each tank prior to treatment in the ~~HAF incinerator~~. Periodic sampling and analysis of waste feed streams takes place as described in the facility Waste Analysis Plan.

Based on process and storage needs, wastes are pumped from each tank independently to the ~~HAF incinerator~~.

### 1.2.2 ~~Combustion Incineration~~ System

The CCIN-1 and CCIN-2 ~~HAFs incinerators~~ are identical and were designed and fabricated by Bigelow-Liptak Corporation. The units operate in a horizontal flow configuration and have demonstrated 99.99% DRE of organic constituents. The size, burner capacity, and thermal capacity of the unit is provided in Section 3.0. ~~Drawing 5D-00-A-500 in~~ Appendix A provides ~~a the~~ plot plan for ~~the CCIN-1 and CCIN-2 HAFs~~.

Organic wastes, vent gases, and natural gas are fed as fuel along with combustion air and atomizing steam into the feed end of the ~~incinerator~~ firebox. Originally, the ~~HAF incinerator~~ utilized a single induced draft (ID) fan to provide motive force to transport the combustion gas through the ~~combustor-incinerator~~. As part of the modifications made for HWC MACT, an additional ID fan was added following the APCS to assist in this function.

Combustion gases in excess of 1700 °F enter the waste heat boiler from the ~~HAF incinerator~~, which generates process steam for on-site use.

### 1.2.3 HCl Absorber

The ~~furnace-incinerator~~ is followed by an absorber system which removes HCl from the combustion gases.

### 1.2.4 Air Pollution Control System (APCS)

Combustion gases from the ~~furnace-incinerator~~, waste heat boiler, and HCl absorber are treated to remove particulate matter, trace metals, chlorine, and dioxins prior to being emitted to the atmosphere. The APCS originally had the following major components:

- Dehumidifier and caustic scrubber; and
- Knock-out drum.

After modifications were made for HWC MACT compliance, the APCS now also includes downstream of the knock-out drum the following components:

- WESP; and
- Catalytic oxidizer.

Combustion gas is vented to the atmosphere through a 125-ft stack, which was also installed as part of the APCS modifications.

More complete information on the APCS is provided in Section 3.9.

### 1.2.5 Blowdown Treatment

The APCS blowdown is routed to the plant waste water treatment system. The blowdown normally contains total dissolved solids (TDS) and total suspended solids (TSS).

## 2.0 Wastes Treated

In the EDC and VCM processes OxyChem generates five separate hazardous organic waste streams that may be treated through combustion in the HAF incineration, which are as follows:

- VCM plant light ends;
- VCM plant heavy ends;
- EDC plant heavy ends;
- Mother liquor; and
- Hazardous waste oil.

Table 2-1 lists the characteristics of these waste streams.

OxyChem does not produce or handle any products containing polychlorinated biphenyls (PCB) that could be regulated under the Toxic Substance Control Act (TSCA). OxyChem does not generate any waste materials that are designated as F020, F021, F022, F023, F026, or F027 wastes (dioxin waste codes). Non-pumpable waste streams are not fed to the furnace incinerator.

The wastes that are burned in the furnace incinerator are generated continuously in the VCM and EDC processes. The composition of the organic wastes does not vary significantly over time. In addition, the characteristics of the organic wastes generated in the VCM and EDC processes have similarities.

Refer to the Waste Analysis Plan for additional information on the wastes. OxyChem has explored and continues to look for additional ways to recover and reuse as much of its wastes as is practicable. Prior to being sent to tanks C-720A and C-720B, reaction byproducts undergo numerous recovery and separation stages at the individual processes to recover product, raw materials, and solvents.

### 3.0 Unit Description

The following sections provide a detailed description of the ~~HAF incineration~~ system. A complete set of process flow diagrams (PFDs) and equipment arrangements are provided as Appendix A. The design parameters for major components of the ~~combustor incinerator system~~ are summarized in Table 3-1. ~~System flow diagrams for the pre-MACT systems are provided in Appendix A, and diagrams for the modified, post-MACT systems are also provided in Appendix A.~~ The ~~combustor incineration system's~~ ~~equipment engineering~~ drawings (Appendix A) and specifications were prepared by OxyChem engineering.

#### 3.1 Description of ~~HAF Incinerator~~

The ~~combustion incinerator~~ system consists of the firebox (combustion zone) and the waste heat boiler. The ~~furnace incinerator~~ and waste heat boiler are oriented to each other as shown in Drawing 5D-00-A-500 in Appendix A ~~Figure 3~~.

##### 3.1.1 Combustion Zone

Combustion of organics takes place in the firebox. The firebox was fabricated by Bigelow-Liptak Corporation with the dimensions presented in Table 3-1. The design has no model number.

The firebox is made of carbon steel and designed for 34 million Btu/hr heat release.

The firebox has field-installed refractory consisting of 7 to 9 inches of firebrick. The unit is designed for a maximum operating temperature of 2,400 °F. The temperature is automatically controlled by reducing excess combustion air and/or the addition of natural gas to maintain a temperature greater than 1,700 °F.

The temperature is measured with a thermocouple at the exit of the combustion chamber. Interlocks are installed to initiate an emergency shutdown of the ~~furnace incinerator~~ should temperatures in excess of 2400 °F be experienced. Conversely, waste liquid feed is automatically cut-off if the temperature falls below the permitted minimum. Firing controls for CCIN-2 are shown in Appendix A.

##### 3.1.2 Waste Heat Boiler

Hot combustion gases at approximately 1,700 - 2,400 °F pass from the firebox through a 6-foot 9-



inch inner-diameter, refractory-lined duct to the flue gas cooler. The flue gas cooler is a fire-tube, waste-heat boiler that is made of carbon steel with refractory on the inlet channel and upstream tube sheet. The unit has a design heat duty of 29.3 million Btu/hr and generates 28,300 lb/hr of 250 psig steam. Combustion gases exit the cooler at approximately 400°F.

The waste heat boiler and steam drum are shown in Appendix A.

### 3.2 Nozzle and Burner Design

Liquid organic waste is fed into the firebox through a single-burner assembly consisting of four waste-liquid injection guns, seven vent-gas nozzles, a spark-ignited pilot, and a single natural gas burner for auxiliary fuel.

Normally, only one or two waste liquid injection nozzles are used at a time for the ~~furnace incinerator~~. The liquid feed flow rate is monitored and automatically controlled. Waste atomization is achieved by the addition of steam to each of the injection nozzles.

Downstream of the vent flow meter, the vent header enters an 8-inch diameter, Teflon-lined, bustle ring. Vent gases pass from the bustle ring into the firebox burner assembly through seven, 2.5-inch diameter vent nozzles located around the outer circumference of the burner assembly.

The pilot, which is always on during normal operation, is a Maxon premix type with a spark igniter.

Combustion air is supplied directly into the burner unit through a 2-foot square inlet, which is mounted vertically behind the burner.

### 3.3 Description of the Auxiliary Fuel Systems

Drawings in Appendix A show the fuel train for the ~~combustion incinerator~~ system. Natural gas is the only support fuel used for the ~~furnace incinerator~~. Up to 20 MMBtu/hr of natural gas can be fired through a single burner. The flow of natural gas is varied to control the firebox temperature.

### 3.4 Capacity of Prime Mover

Combustion air is drawn into the combustion chamber by the action of an induced-draft fan, located downstream of the caustic scrubber. With the added HWC MACT equipment, air flow is also maintained by a second induced-draft fan located downstream of the catalytic oxidizer. The

materials of construction for these fans are listed in Table 3-1.

Air is introduced to the burner through a screened vent, and air flow is controlled by the temperature control damper, which is upstream of the acid absorber.

Under normal operation, air flow is adjusted to maintain temperature, and natural gas is adjusted to maintain minimum temperature. However, if there are still insufficient heat releases, air flow may be reduced, as needed, to maintain firebox temperature. When firing little or no liquid waste, natural gas flow may be maximized. A mechanical stop on the damper prevents it from reducing air flow below a level that would maintain combustion at about 40% of the design rate. This minimum air flow rate corresponds to the maximum fuel gas rate.

A small amount of air is introduced into the pilot line by a Maxon premix blower. The blower is made of carbon steel and has an associated motor.

### 3.5 Description of Waste Feed Systems

There are three primary liquid hazardous waste streams that are destroyed in the ~~HAF-incinerator~~: VCM plant heavy ends (VCM HE), VCM plant light ends (VCM LE), and EDC plant heavy ends (EDC HE). The VCM HE and VCM LE are generated as a result of VCM production. EDC HE is generated at the EDC plant. Also, hazardous waste oil and mother liquor are occasionally generated. These two streams are blended with the other waste streams prior to ~~combustion~~incineration.

The heavy ends normally are ~~combusted~~incinerated separately from the light ends. However, it is possible that they may occasionally be combined into one stream.

#### 3.5.1 Liquid Wastes Delivery

The flow of liquid feeds to the ~~furnace-incinerator~~ is continuously monitored and recorded. The feed line is equipped with a mass flow meter and an automatic waste feed cut-off valve. The waste liquid feed flowrate is set manually, but the temperature controller can automatically override the liquid waste feed controller and reduce the liquid waste feed to maintain the firebox temperature below a temperature necessary for equipment safety.

Downstream of the flow monitor, the liquid waste feed line is connected to a header. The ~~furnace-incinerator~~ includes four liquid waste burners that receive feed from this header. Each

burner is atomized with steam. Typically, only one or two burners are in operation at a time. A description of the burner nozzles is presented in Section 3.2.

### **VCM Plant Heavy Ends**

The VCM HE is pumped from a 65,000 gallon RCRA permitted storage tank to the burner unit. The VCM HE delivery pump is a centrifugal pump. Average production rate of the VCM HE is 6,400 lb/hour.

### **VCM Plant Light Ends**

The VCM LE is pumped at ambient temperature from a 65,000 gallon RCRA permitted storage tank. The delivery pump is a centrifugal pump. Average production rate of the VCM LE is about 1,000 lb/hr.

### **EDC Plant Heavy Ends**

The EDC HE, which is generated at a rate of approximately 140 lb/hr, is transferred to one of the 65,000 gallon RCRA permitted tanks to the ~~HAF-incinerator~~.

### **Waste Oil**

Waste oil is periodically generated at different areas within the plant and is normally disposed of off-site. However, it may be collected and blended into one of the RCRA-permitted tanks.

### **Mother Liquor**

Mother liquor is periodically generated at different areas within the plant, and is normally disposed of off-site. However, it may be collected and blended into one of the RCRA-permitted tanks.

## **3.5.2 Vent Gases**

Process vent gases are collected in a 10-inch Teflon-lined header. Entrained liquid is removed in a knock-pot before the header splits to the ~~furnace-incinerator~~. The split between the two ~~HAFs-incinerators~~ (CCIN-1 and CCIN-2) is adjusted by a manual loading valve in the feed line. Vent flow is metered and monitored in the control room. Average vent flow is typically about 500 SCFM to the unit. Nitrogen is automatically added to maintain a minimum vent flow of 300 SCFM to prevent a flashback in the vent line.

## **3.6 Fugitives Control**

The ~~HAF-incinerator~~ operates under an induced draft from the fans, which maintains a negative pressure. The feed of liquid waste is automatically cut-off if the pressure in the firebox is greater than or equal to atmospheric pressure.

### 3.7 Description of Automatic Waste Feed Cutoff System

The automatic waste feed cutoff (AWFCO) system interlocks to prevent feeding liquid hazardous waste if ~~the HAF operating-incineration~~ conditions are outside the RCRA permit limits. The AWFCO system resides in the distributed control system (DCS). During startup and shutdown of the ~~HAF-incinerator~~ or during process upsets, the interlock system automatically stops hazardous liquid waste feed systems and prevents their restart until the ~~HAF-incinerator~~ is at proper operating conditions, and the interlock is reset by the DCS operator. The process controller adjusts auxiliary fuel feed (natural gas) to the waste burners upon any AWFCO event in order to maintain the firebox temperatures.

Descriptions of process monitoring instruments that are interlocked with the AWFCO system under the RCRA permit and their instrument ranges are included in Section 3.12. OxyChem's RCRA Part B permit requires the AWFCO system and associated alarms that would initiate the cut-off to be tested at least weekly to verify operability. To clarify this it says, "All associated alarm test circuits shall be activated to demonstrate circuit continuity." The DCS performs the test for all the alarm circuits almost continuously.

Alarm checking is a task performed within the DCS. When an alarm point is reached, the programmable logic controller (PLC), which hosts the emergency shutdown system functions including waste feed cutoff valves, firebox burner management, etc., will first initiate any interlock actions that may be required. Then the PLC will send the "shutdown alarm" signal along the universal control networks (UCN) to the network interface module (NIM). Any process alarms are sent from the high performance process manager (HPM), which hosts functions such as PID control, valve outputs, etc., to the NIM. The NIM then assigns an alarm priority and sends out the alarm on the local control network (LCN) to any and all devices that need the information. The universal station (operator station) will receive the alarm signal and notify the operator by sounding an audible alarm and a LED indication light for the unit with the alarm.

Alarm management at this point is very similar to the analog alarm annunciator boards. The operator can silence the alarm and then acknowledge the alarm.



The alarm circuit path described above is continuously checked through extensive diagnostic programs on several computer devices. If a failure is found, as stated above, an alarm is sent to the operator immediately and, where appropriate, the system takes action to avert a problem that may be caused by the malfunction. On a weekly basis, this system is monitored at the universal station.

For greater detail of the DCS and circuit continuity checks, see Appendix B, which details procedures for testing alarm operability.

### 3.7.1 Emergency Shutdown Procedures

The emergency shutdown system consists of instrumentation that is designed to keep the ~~HAF incinerator system~~ from operating at conditions that could endanger personnel, damage the ~~incinerator~~ equipment, or lead to unacceptable emissions to the atmosphere. Three types of actions may result from operating conditions deviating beyond pre-defined limits. These actions are: 1) total system shutdown; 2) total flame shutdown; and 3) waste liquid feed cutoff. The ~~HAF operating incinerator~~ conditions that lead to the three types of emergency actions are described below.

#### 3.7.1.1 Total Shutdown

A total shutdown automatically terminates all burning in the firebox. The waste liquid, vent gases, and natural gas are shut off to the firebox. In addition, the induced draft fan and pilot premix blower are both shutdown. The following conditions cause a total shutdown:

| Total System Shutdown Parameter  | Cut-Off Limit/Condition |
|----------------------------------|-------------------------|
| Low steam drum level             | 10%                     |
| High absorber bottom temperature | 200 °F                  |
| High absorber liquid level       | 90%                     |

#### 3.7.1.2 Total Flame Shutdown

A total flame shutdown automatically terminates all burning in the firebox. The waste liquid, vent gases, and natural gas are shut off to the firebox. The induced draft fan and pilot premix blower continue running to purge the system of any corrosive and combustible material. The following conditions cause a total flame shutdown.

| <b>Total Flame Shutdown Parameter</b>  | <b>Cut-Off Limit/Condition</b> |
|----------------------------------------|--------------------------------|
| High natural gas pressure <sup>a</sup> | 25 psig                        |
| Low natural gas pressure <sup>a</sup>  | 5 psig                         |
| High pilot gas pressure                | 9" water                       |
| Low pilot gas pressure                 | 3" water                       |
| Low pilot mixer pressure drop          | 2" water                       |
| Low blower suction draft               | 10" water                      |
| Low firebox draft                      | -0.05" water                   |
| High firebox temperature               | 2,400 °F                       |
| Loss of flame detection                | Absence                        |

a – In this case, vents and liquid waste are shut off, but the pilot gas continues to operate.

### 3.7.1.3 Waste Liquid Feed Cutoff

Hazardous waste liquid feed to the firebox is automatically shut off due to the conditions detailed below. The ~~HAF incinerator~~ continues to run on natural gas to ~~combust incinerate~~ vent gases. These limits and conditions reflect AWFCO requirements for the OxyChem hazardous waste ~~HAF incinerator~~.

| <b>Automatic Waste Feed Cutoff Parameter</b> | <b>Cut-Off Limit/Condition</b>                             |
|----------------------------------------------|------------------------------------------------------------|
| Low Firebox Temperature                      | < 1,787 °F (Hourly Rolling Average)                        |
| Maximum Liquid Waste Feed Rate               | > 5,815 lb/hr (Hourly Rolling Average)                     |
| Maximum Chloride Feed Rate                   | > 3,574 lb/hr (12-Hourly Rolling Average)                  |
| Minimum Caustic Scrubber Liquid to Gas Flow  | < 12.44 gpm/kscfm (Hourly Rolling Average)                 |
| Minimum Caustic Scrubber Recycle pH          | < 8.91 (Hourly Rolling Average)                            |
| Maximum Stack Gas Flow                       | > 21.63 kacfm (Hourly Rolling Average)                     |
| Maximum Combustion Chamber Pressure          | > 0 in. wc (Instantaneous)                                 |
| Maximum Stack Gas CO Concentration           | ≥ 100 ppm dry @ 7% O <sub>2</sub> (Hourly Rolling Average) |
| Minimum Waste Atomization Steam Pressure     | < 64 psig (Instantaneous)                                  |
| Minimum Caustic Scrubber Recycle Pressure    | < 7.0 (Hourly Rolling Average)                             |

In addition, the waste feed cut-off system activates under any of the following conditions:

- Electrical power outage;
- Liquid injection system flame-out;

- Loss of flame in the combustion chamber;
- Loss of instrument air;
- Shutdown of main induced draft fan;
- Loss of waste atomizing fluid;
- Loss of combustion air;
- Failure of computer monitoring system; or
- Malfunction of pollution control system.

Final AWFCO parameter values for permitted operation under 40 CFR Part 63 Subpart EEE and additional State of Texas requirements are expected to be negotiated between the TCEQ and OxyChem based on the results of subsequent CPT tests.

### **3.8 Stack Gas Monitoring**

Continuous emissions monitoring systems (CEMS) are used to monitor stack gases continuously for carbon monoxide and oxygen concentrations. Continuous emissions monitor ranges are listed in Table 3-2.

The CO and O<sub>2</sub> CEMS meet all of the performance specifications detailed in 40 CFR Part 60, Appendix B, Performance Specification 4B and the data analysis and recording requirements in 40 CFR Sections 63.8(c)(4) and 63.8(g). Dedicated sample ports for the CEMS probes are located in the stack.

If any CEM system ceases to operate correctly, or if a zero and span procedure for an analyzer exceeds 20 minutes in duration, the liquid waste feed must be cut-off.

### **3.9 HCl Absorber**

The HCl absorber is designed primarily to recover HCl from the combustion gases for reuse in other processes at the plant. The HCl absorber is a packed column constructed of rubber-lined carbon steel covered with an acid-brick lining. The dimensions of the absorber are included in Table 3-1.

Gases from the waste-heat boiler are introduced into the absorption column through a 47-inch inner-diameter inlet that is lined with refractory. Water from the plant and occasionally blowdown from the dehumidifier are introduced at the top of the column, immediately cooling the combustion gases to about 150 °F in this section.

Water is pumped from the bottom of the column. The acid is normally recycled to the quench section and to the lower bed. Excess acid from the bottom of the column is cooled in a graphite cooler and used on-site for pH control in the VCM process and wastewater treatment system.

Excess acid is neutralized with limestone, caustic, or other alkaline streams in the plant's wastewater treatment system. A drawing showing the HCl absorber unit for CCIN-2 is provided in Appendix A.

### **3.10 Air Pollution Control System Equipment**

#### **3.10.1 Overview**

As described in Section 3.0, the APCS originally had the following major components:

- Dehumidifier and caustic scrubber; and
- Knock-out drum.

After modifications made for HWC MACT compliance, the APCS now includes the following components located downstream of the knock-out drum:

- WESP; and
- Catalytic oxidizer.

Combustion gas is vented to the atmosphere through a 125-ft stack.

#### **3.10.2 Dehumidifier and Caustic Scrubber**

Gases exiting the HCl recovery system enter the first of two spray scrubber columns (a dehumidifier column), which is followed by a caustic scrubber column. Dimensions and materials of construction for the unit are included in Table 3-1. A drawing showing the scrubber for CCIN-2 is provided in Appendix A.

Gases (at approximately 149°F) from the HCl recovery system are introduced at the top of the dehumidifier column. Gases are cooled to about 113 °F and are dehumidified by co-current direct contact with water that is recycled from the caustic scrubber. Sodium hydroxide is added to maintain the pH of the scrubbing water above 8 and absorb chlorine and HCl from the flue gases. Sodium thiosulfate or sodium bisulfite is injected into the scrubbing water to complete conversion of the Cl<sub>2</sub> to chloride. The average flow rate of water to the dehumidifier



is 700 gpm. Dehumidifier bottoms are cooled to 100 °F and recycled to the caustic scrubber. A small amount of blowdown is removed from the scrubber to purge salts from the scrubbing water system. Softened water is added to the caustic scrubber on level control to make up for blowdown losses.

Gases from the dehumidifier pass through a 36-inch diameter FRP pipe to the caustic scrubber. Inside the scrubber, spray nozzles discharge water that consists primarily of cooled bottoms from the dehumidifier column. Similar to the dehumidifier column, sodium hydroxide is added to raise the pH of the scrubbing water above 8.

### **3.10.3 Knock-Out Drum**

The knock-out drum receives combustion gases from the caustic scrubber at approximately 100°F. Dimensions and materials of construction for the knock-out drum are included in Table 3-1. The knock-out drum serves to separate entrained moisture from the combustion gases. The collected water flows by gravity to the caustic scrubber bottoms stream, which is then pumped to the dehumidifier column. A drawing showing these components for CCIN-2 is provided in Appendix A.

### **3.10.4 Wet Electrostatic Precipitator**

The WESP is a device that was installed to remove sub-micron sized PM and metals from the gas stream. The design for the WESP is a down-flow, tubular-component vessel that uses saturated inlet gas as the irrigation medium. Dimensions and materials of construction for the WESP are included in Table 3-1. A drawing showing the flow diagram for the WESP associated with CCIN-2 is provided in Appendix A.

As gases enter the vertical collecting tubes, a high-intensity corona charges the water vapor, PM, and condensed metals. Charged particles and water vapor mist migrate to the collecting tube walls to form the irrigation film draining by gravity down the tube. The corona is produced by a discharge electrode which is centered in each collecting tube.

The WESP is designed for a 95% removal efficiency for particulate matter to meet or exceed the MACT requirements for emissions of semi-volatile metals and low volatile metals.

Periodically, the WESP requires flushing with an external source of water. A WESP wash water tank stores water required for the WESP on CCIN-2. Water from this tank is pumped to the WESP

on a timed basis. Dimensions and materials of construction for the WESP wash water tank are included in Table 3-1.

A separate WESP water drain tank for the WESP is used to collect the flush water from the WESP. The WESP water drain tank is sized to contain two wash cycles assuming no pump out. This water is routed to the waste water treatment system (WWTS). Dimensions and materials of construction for the WESP water drain tank is included in Table 3-1.

### **3.10.5 Heat Exchangers, Preheaters, and Catalytic Oxidizer**

Saturated gas leaving the WESP passes through a steam-heated superheater to raise the temperature from 129 °F to 155 °F, which is above the dew point. Superheated gas then passes through the cold side of the cross exchanger. The cross exchanger is a gas-to-gas heat exchanger that partially preheats feed to the catalytic oxidizer by recovering heat from the stream leaving the catalytic oxidizer.

Gas leaving the cross exchanger is sent to the catalytic oxidizer pre-heater, which is a natural gas fired heater designed to raise the gas above the 420 °F (450 °F used for design) minimum inlet temperature required for the catalytic oxidizer. Approximately 40 scfm of natural gas is required.

The catalytic oxidizer is a vapor phase dioxin/furan (PCDD/F) destruction device based on established selective catalytic reduction (SCR) technology used for NO<sub>x</sub> control. Hot preheated gas is passed through a cubical vessel containing a grid of honeycomb catalyst layers. The catalytic oxidizer is designed to destroy in excess of 96% of the vapor phase PCDD/F based on an inlet of 10 ng/dscm TEQ at 7% O<sub>2</sub> reducing to an outlet concentration of no more than 0.3 ng/dscm TEQ. Treated gases leaving the catalytic oxidizer are sent to the hot side of the cross exchanger to partially preheat incoming feed.

Dimensions and materials of construction for the super heater, cross exchanger, preheater, and catalytic oxidizer, are included in Table 3-1. Drawings for the super heater, cross exchangers, preheater, and catalytic oxidizer are provided in Appendix A.

### **3.10.6 Vent Stack**

Historically, combustion gases from the knock-out drum were drawn into the induced-draft blower and discharged to the vent stack.

As a result of HWC MACT upgrades, treated gases exiting the cross exchanger hot side are sent to the suction of a new ID fan, which provides motive force to pull the gases through the new equipment. The ID fan discharges to a new 3.5 feet diameter stack that is 125 feet tall.

There are two sampling ports located on the new stack, which are located 90 degrees apart from each other and are accessible from a sampling platform. Stack gases are monitored for carbon monoxide and oxygen.

### 3.11 Construction Materials

Construction materials for the ~~HAF-incinerator system~~ components are specified in Table 3-1

### 3.12 Location and Description of Temperature, Pressure, and Flow Indicating and Control Devices

Locations of process control instruments are provided in the unit process flow diagrams (Appendix A). This section provides a general description of temperature, pressure, flow, and other instrumentation requirements necessary to ensure compliance with all permit conditions. A discussion of the major controls for the ~~HAF-incineration system~~ that are-is linked to the DCS is also provided. There is a separate PLC for burner management that communicates with the DCS. Section 3.7.1.3 presents the parameters that are used to monitor plant operations and record data for the facility operating record and test burns. Instrument calibration is performed according to manufacturer's specifications.

The DCS controls the ~~HAF-incineration system~~ operations. A description of the primary control loops follows. AWFCO functions for each control are discussed in Section 3.7.

#### 3.12.1 Waste Feed Rate Control

A mass flow meter in combination with the DCS maintains a continuous record of the hazardous waste feed rate to the ~~furnace-incinerator~~. The feed rate of chlorine and ash during operations may be calculated by multiplying this feed rate by the parameter concentration measured following the Waste Analysis Plan.

The total and average heat input values for the feeds to the ~~HAF-incinerator~~ are calculated in the DCS by a heat balance around the waste heat boiler.

### **3.12.2 Combustion Chamber Gas Temperature and Burner Controls**

Firebox temperature is controlled by modulating air flow, natural gas flow rate, or the waste to the burners

Thermocouples record combustion temperature in the exit from the firebox. Temperature recorders and temperature indicators in the DCS continuously monitor the process.

Natural gas feed rate to the burner is measured with a vortex meter prior to the feed nozzle. Natural gas pressure (a permitted AWFCO) is measured with an electronic differential pressure transmitter switch.

Atomizing steam pressure, a permitted AWFCO, is measured using a differential pressure transmitter on the steam header to the nozzles.

### **3.12.3 HCl Absorber Packed Bed Inlet Gas Temperature**

Inlet temperature to the HCl absorber packed bed is measured with a thermocouple. Temperature indicators in the DCS continuously monitor the process. If a high temperature is detected, the alarm is activated.

### **3.12.4 Quench Chamber Water Flow Rate**

The flow rate of water to the quench chamber nozzles (a permitted AWFCO) is measured using magmeters or vortex meters on the quench inlet line to the feed nozzles.

### **3.12.5 Scrubber Recycle pH**

The pH of the caustic scrubber recycle liquor is monitored by means of a pH probe in the bottom effluent from the caustic scrubber. Caustic is added, as necessary, to maintain the desired pH.

### **3.12.6 WESP Transformer/Rectifier (T/R) kVA**

The T/R control displays primary and secondary voltage. The control panel sends voltage information to the DCS where the HRA secondary kVA interlock is initiated.

### **3.12.7 Stack Gas Oxygen and Carbon Monoxide Levels**

Stack gas emission levels are measured by means of parameter specific stack gas analyzers as described in Section 3.8.

### **3.13 Combustion Gas Flow Rate**

Combustion gas flow rate is measured with a flow monitor that is mounted on the new exhaust stack.



## 4.0 Closure

A closure plan, which describes the procedures that will be implemented for closure of ~~HAF Incinerator~~ CCIN-2, is provided ~~in Attachment VII.A.5as Appendix C~~. Historically prepared ~~closure cost estimates, which were reviewed and approved by TCEQ in prior applications,~~ are also provided as part of the closure plan. ~~However, it should be noted that these closure cost estimates were developed using an overly conservative costing assumption that contaminated soils would be present.~~

~~That assumption has not been carried over to the closure cost tables in the Part B application form. Also, at the time of closure, OxyChem intends to use facility personnel and appropriate contractors to perform closure activities with supervision provided by an independent, licensed professional engineer.~~

## 5.0 References

U.S. Environmental Protection Agency (EPA). "Guidance Manual for Hazardous Waste Incinerator Permits." Office of Solid Waste, Washington, D.C. March 1983.

U.S. EPA. "Guidance on Setting Permit Conditions and Reporting Trial Burn Results." Hazardous Waste Incineration Guidance Series, Volume II. Office of Solid Waste. Washington D.C. EPN625/6-89/019. January 1989.

U.S. EPA. "BIF Technical Implementation Document." Washington, D.C. EPA-530-R-92-011. March 1992.

U.S. EPA. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods." Washington, D.C. SW-846. Update III. December 1996.

U.S. EPA. "Protocol for Human Health Risk Assessment at Hazardous Waste Combustion Facilities." EPA-R6-098-002. Center for Combustion Science and Engineering, Multimedia Planning and Permitting Division, U.S. EPA Region 6. Dallas, Texas. January 1998a.

U.S. EPA. "Protocol for Screening Level Ecological Risk Assessment at Hazardous Waste Combustion Facilities." EPA-R6-098-003. Center for Combustion Science and Engineering, Multimedia Planning and Permitting Division, U.S. EPA Region 6. Dallas, Texas. January 1998b.

## Tables

**Table 2-1 Stream Characteristics**

| <b>Component</b>                                                            | <b>VCM<br/>HE</b> | <b>VCM<br/>LE</b> | <b>EDC<br/>HE</b> | <b>Hazardous<br/>Waste Oil</b> | <b>Mother<br/>Liquor</b> |
|-----------------------------------------------------------------------------|-------------------|-------------------|-------------------|--------------------------------|--------------------------|
| <b>Organic Hazardous Air Pollutants (HAPs) Concentration Ranges (wt. %)</b> |                   |                   |                   |                                |                          |
| Vinyl Chloride Monomer                                                      | -                 | 0-5               | -                 | -                              | -                        |
| Carbon Tetrachloride                                                        | -                 | 0-15              | -                 | -                              | -                        |
| Chloroform                                                                  | 0-5               | 0-100             | -                 | -                              | -                        |
| Chloroethane                                                                | -                 | 0-10              | -                 | -                              | -                        |
| 1,1,2,2-Tetrachloroethane                                                   | 5-25              | -                 | -                 | -                              | <1                       |
| Trichloroethylene                                                           | 0-2               | 0-5               | -                 | -                              | <2                       |
| 1,1,1-Trichloroethane                                                       | 0-5               | -                 | -                 | 0-5                            | -                        |
| 1,1,2-Trichloroethane                                                       | 0-90              | -                 | 5-30              | -                              | <1                       |
| 1,1-Dichloroethane                                                          | -                 | 0-30              | -                 | -                              | -                        |
| 1,2-Dichloroethane                                                          | 10-100            | 0-100             | 10-50             | 0-5                            | 40-60                    |
| Chloroprene                                                                 | -                 | 0-15              | -                 | -                              | -                        |
| Tetrachloroethylene                                                         | 0-15              | -                 | 5-25              | -                              | -                        |
| Chlorobenzene                                                               | 0-5               | -                 | -                 | -                              | -                        |
| Hexachlorobenzene                                                           | -                 | -                 | -                 | -                              | <2                       |
| <b>Other Organic Constituents Concentration Ranges (wt. %)</b>              |                   |                   |                   |                                |                          |
| 1,2-Dichloroethylene                                                        | -                 | 0-20              | -                 | -                              | -                        |
| 2-Chloroethanol                                                             | 0-2               | -                 | -                 | -                              | -                        |
| Ethylene                                                                    | -                 | 0-3               | -                 | -                              | -                        |
| Bis(2-chloroethyl)ether                                                     | 0-30              | -                 | 1-5               | -                              | -                        |
| Octachlorocyclopentane                                                      | -                 | -                 | -                 | -                              | <1                       |
| Heptachloropropane/Heptachlorobutene                                        | -                 | -                 | -                 | -                              | <1                       |
| Heavier Compounds <sup>a</sup>                                              | 30-60             | -                 | 25-50             | -                              | 30-60                    |
| Oil                                                                         | -                 | -                 | -                 | >95                            | -                        |
| <b>Maximum Inorganic HAP Concentrations (mg/kg)<sup>b</sup></b>             |                   |                   |                   |                                |                          |
| Arsenic                                                                     | 2                 | 2                 | 2                 | -                              | -                        |
| Cadmium                                                                     | 5                 | 5                 | 1                 | -                              | -                        |
| Chromium                                                                    | 11.3              | 1                 | 1                 | -                              | 10                       |
| Lead                                                                        | 20                | 5                 | 5.3               | -                              | -                        |
| Mercury                                                                     | 0.2               | 0.1               | 0.1               | -                              | -                        |
| Selenium                                                                    | 5                 | 5                 | 1                 | -                              | -                        |
| Hydrochloric Acid                                                           | -                 | -                 | -                 | -                              | <5                       |
| Chlorine                                                                    | 65-90             | 65-90             | 65-90             | <1                             | 65-75                    |

**Table 2-1 Stream Characteristics (continued)**

| <b>Component</b>                                          | <b>VCM<br/>HE</b> | <b>VCM<br/>LE</b> | <b>EDC<br/>HE</b> | <b>Hazardous<br/>Waste Oil</b> | <b>Mother<br/>Liquor</b> |
|-----------------------------------------------------------|-------------------|-------------------|-------------------|--------------------------------|--------------------------|
| <b>Other Inorganic Constituent Concentrations (µg/kg)</b> |                   |                   |                   |                                |                          |
| Zinc                                                      | -                 | -                 | -                 | <10                            | -                        |
| Iron                                                      | -                 | -                 | -                 | -                              | <50,000                  |
| <b>Other Waste Stream Characteristics</b>                 |                   |                   |                   |                                |                          |
| Ash Content (ppm)                                         | 0-1,720           | 0-750             | 0-750             | 4,000-<br>30,000               | 10,000-<br>100,000       |
| Higher Heating Value (Btu/lb)                             | 5,000-<br>6,200   | 5,000-<br>6,500   | 5,000-<br>6,200   | 10,000-<br>20,000              | 5,000-<br>6,000          |
| Average Production Rate (lb/hr)                           | 6,400             | 1,000             | 140               | <sup>c</sup>                   | <sup>c</sup>             |
| Density (lb/gal)                                          | 10-12             | 10-11             | 10-11             | 7.2-7.6                        | 11-12                    |

<sup>a</sup> – Primarily chlorinated butanes and butenes

<sup>b</sup> – Except chlorine, which is presented as a range of weight percents

<sup>c</sup> – Intermittently generated



**Table 3-1 ~~HAF Incinerator~~ Equipment <sup>1</sup>**

|                                                                                                                                                           |                                                                                                                        |                                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| <u>Firebox</u><br>(F-550, F-570) <sup>2</sup><br>30' L x 9'5" H x 8'5" W<br>2,379 ft <sup>3</sup> volume<br>79 ft <sup>2</sup> cross section<br>Firebrick | <u>Caustic Scrubber</u><br>(C-553, C-573) <sup>2</sup><br>6' D x 33'6" H<br>Fiberglass-reinforced plastic (FRP)        | <u>WESP Water Drain Tank</u><br>(D-550, D-570) <sup>2</sup><br>7' D x 8' H<br>2,300 gallons<br>FRP       |
| <u>Flue Gas Cooler</u><br>(E-550, E-570) <sup>2</sup><br>8,230 ft <sup>3</sup><br>29.3 MM Btu/hr<br>406°F/250 psig<br>Carbon steel (CS)                   | <u>Knock-Out Drum</u><br>(C-554, C-574) <sup>2</sup><br>6'10" ID x 10' H<br>FRP                                        | <u>Super Heater</u><br>(E-553, E-573) <sup>2</sup><br>CS/Hastelloy C                                     |
| <u>Waste Heat Boiler Steam Drum</u><br>(C-550, C-570) <sup>2</sup><br>3'6" D x 20' L<br>28,300 lb/hr steam<br>300 psig<br>Carbon steel                    | <u>Vent Draft Blower</u><br>(K-551, K-571) <sup>2</sup><br>17,600 acfm<br>150 HP/1,800 RPM<br>Hastelloy rotor/FRP case | <u>Cross Exchanger</u><br>(E-554, E-574) <sup>2</sup><br>CS/CS                                           |
| <u>Spray Quench</u><br>2 nozzles in-line                                                                                                                  | <u>Vent Stack</u><br>(A-551, A-571) <sup>2</sup><br>3'6" D (at exit) x 125' H<br>Carbon Steel                          | <u>Catalytic Oxidizer Pre-Heater</u><br>(F-551, F-571) <sup>2</sup><br>5.6 MM Btu/hr<br>CS/310 SS        |
| <u>Acid Absorber</u><br>(C-551, C-571) <sup>2</sup><br>7' ID x 48" H total<br>2 packed beds<br>each bed 12' H<br>462 ft <sup>3</sup> /bed                 | <u>WESP Wash Water Tank</u><br>(D-561) <sup>3</sup><br>9' D x 10' H<br>4,700 gallons<br>FRP                            | <u>Catalytic Oxidizer</u><br>(V-550, V-570) <sup>2</sup><br>Carbon Steel                                 |
| <u>Dehumidifier Column</u><br>(C-552, C-572) <sup>2</sup><br>6' D x 33'6" H<br>FRP/polyvinyl chloride (PVC) liner                                         | <u>WESP</u><br>(Y-550, Y-570) <sup>2</sup><br>13' D x 41' H<br>4 x 62 kV Transformer/Rectifiers<br>FRP/Hastelloy C     | <u>Catalytic Oxidizer ID Fan</u><br>(K-554, K-574) <sup>2</sup><br>32,000 acfm<br>450 HP<br>Carbon Steel |

<sup>1</sup>Based on design conditions

<sup>2</sup>The first number designates the unit within the CCIN-1 ~~HAF-incinerator~~ system and the second number designates the unit within the CCIN-2 ~~HAF-incinerator~~ system

<sup>3</sup>Common to both CCIN-1 and CCIN-2

**Table 3-2      Stack Gas Monitoring Equipment**

| Parameter       | Range                                    |
|-----------------|------------------------------------------|
| Oxygen          | 0-25% v                                  |
| Carbon Monoxide | dual range<br>0-200 ppmv<br>0-3,000 ppmv |

## Figures

## Appendix A

### Equipment Engineering Drawings

Dwg. 9D-00A-900, Rev. 1 – Overall Master Plan

Dwg. 5D-00-A-500, Rev. 14 – Plot Plan – Incinerator Unit – CCIN-1 and CCIN-2

~~Dwg. 5D-B-009, Rev. 7 – VCM Plant Process Flow Diagram~~

Dwg. 5D-B-010, Rev. 5 – Process Flow Sheet – MACT Project - CCIN-1/CCIN-2

~~Dwg. 5D-00-A-500, Rev. 14 – Plot Plan – Incinerator Unit – CCIN-1 and CCIN-2~~

Dwg. 5D-A-026, Rev. 46 – CCIN-2 – Firing Controls

Dwg. 5D-A-027, Rev. 19 – CCIN-2 - Waste Heat Boiler and Steam Drum

Dwg. 5D-A-028, Rev. 27 – CCIN-2 - HCl Absorber and Acid Cooler

Dwg. 5D-A-029, Rev. 20 – CCIN-2 – D/H Column and Caustic Scrubber

Dwg. 5D-A-030, Rev. 21 – CCIN-2 – Knock-Out Drum, Fan, and Stack

Dwg. 5D-A-046, Rev. 2 – CCIN-1/CCIN-2 - WESP Wash Water Tank

Dwg. 5D-A-051, Rev. 11 – CCIN-2 – WESP

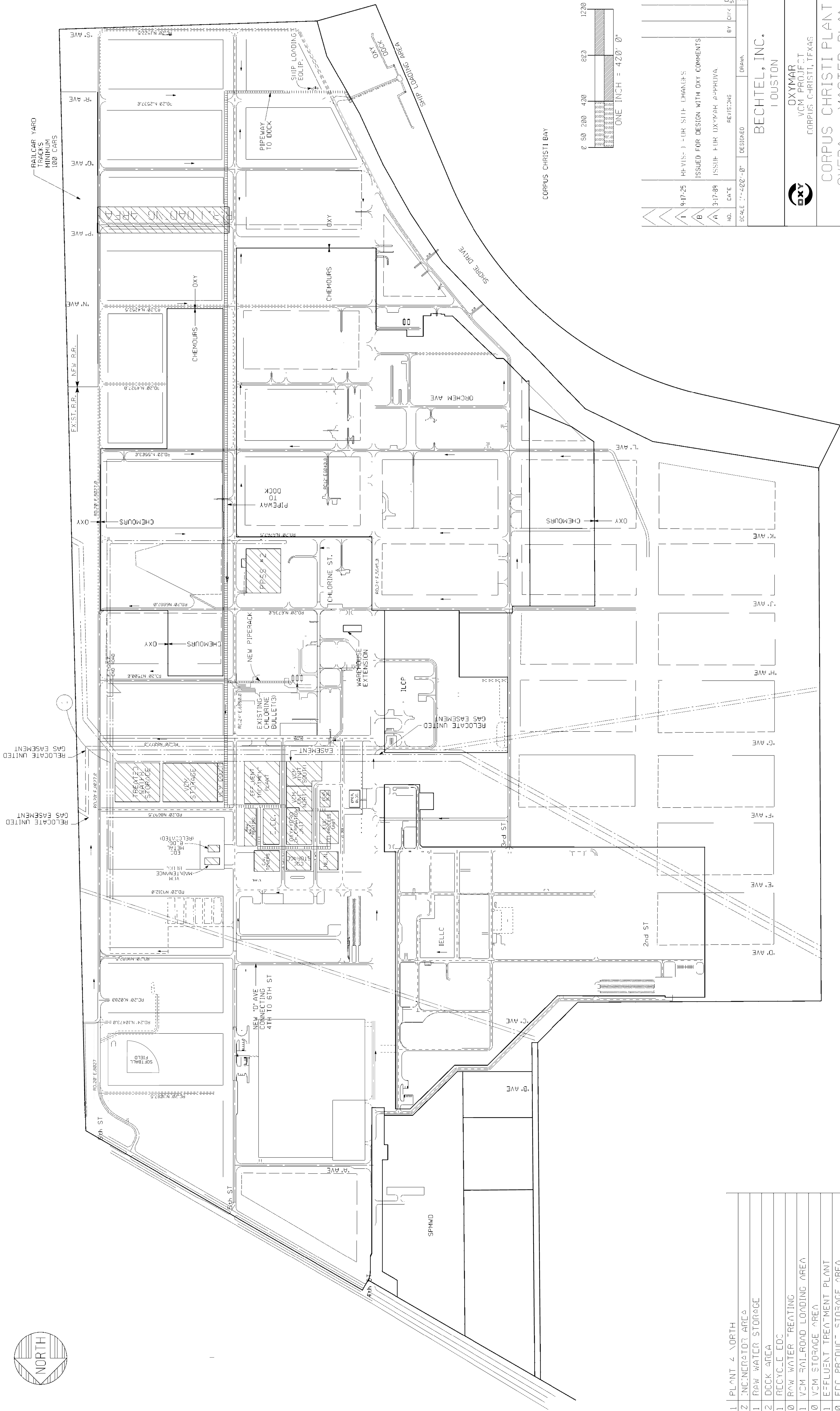
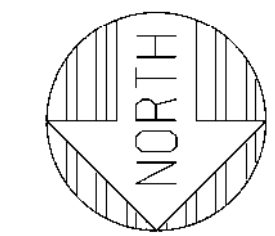
~~Dwg. 5D-A-046, Rev. 2 – WESP Wash Water Tank – CCIN-1/CCIN-2~~

Dwg. 5D-A-052, Rev. 9 – CCIN-2 – Superheater and Catalytic Oxidizer

Dwg. 5D-A-053, Rev. 10 – CCIN-2 – Cat Ox Preheater

Dwg. 5D-A-054, Rev. 9 – CCIN-2 – Cat Ox ID Fan and Stack





|            |                                         |
|------------|-----------------------------------------|
| 4D-00A-401 | PLANT & NORTH                           |
| 50-00A-502 | INCINERATOR AREA                        |
| 60-00A-601 | RAW WATER STORAGE                       |
| 8C-02A-802 | DCK AREA                                |
| 7C-0CA-701 | RECYCLE EDC                             |
| 7C-02A-620 | RAW WATER TREATING                      |
| 8C-02A-801 | VCM RAILROAD LOADING AREA               |
| 8C-02A-800 | VCM STORAGE AREA                        |
| 5C-02A-501 | EFLUENT TREATMENT PLANT                 |
| 7C-02A-700 | EDC PRODUCE STORAGE AREA                |
| 2D-20A-200 | EDC PROCESS UNIT                        |
| 4C-02A-400 | PANTRY 4 SOUTH                          |
| 3D-20A-302 | PANTRY 3 OVERHEAD                       |
| 9C-22A-921 | PROCESS AREA 4W, SW, SE, F, H-H, J, AVF |

## REFERENCE DRAWINGS

| HQI ID# | REASON        | RT SP.<br>RISK | SCHEDULE<br>RELEASE | ACTUAL<br>RELEASE |
|---------|---------------|----------------|---------------------|-------------------|
| 1       | PHOTOGRAPHING |                |                     |                   |
|         |               |                |                     |                   |
|         |               |                |                     |                   |
|         |               |                |                     |                   |
|         |               |                |                     |                   |

| SCALE | 1" = 400' - 0" | DESIGNED | REVISIONS                                                                 | BY | CHECK | DESIGNED | PROJECT ENGINEER | DATE |
|-------|----------------|----------|---------------------------------------------------------------------------|----|-------|----------|------------------|------|
| A     | 9-17-25        |          | REVISION - 1 - OUR SITE CHANGE(S):<br>ISSUED FOR DESIGN WITH OXY COMMENTS |    |       |          |                  |      |
| B     |                |          |                                                                           |    |       |          |                  |      |
| A     | 3-17-89        |          | ISSUED FOR OXYGEN APPROVAL                                                |    |       |          |                  |      |
| NO.   | DATE           |          |                                                                           |    |       |          |                  |      |

BECHTEL, INC.  
HOUSTON

OXYMAR  
VCM PROJECT  
CORPUS CHRISTI, TEXAS

CORPUS CHRISTI PLANT  
OVERALL MASTER PLAN

|                                                                                    |         |             |      |
|------------------------------------------------------------------------------------|---------|-------------|------|
|  | JOB NO. | LEASING NO. | REV. |
|                                                                                    | 1961    | 90-004-900  | 1    |

CADD FILE NAME: C:\00A972.DCN [232,05]

$$Z = OX \cdot C \cdot BY \cdot C \cdot Z$$

## **Appendix B**

### **Alarm Operability**

## **Introduction**

40 CFR 63.1206(c)(3)(vii) requires the automatic waste feed cut-off (AWFCO) system and associated alarms to be tested at least weekly to verify operability, unless it is documented in the facility operating record that weekly testing unduly restrict or upset operations and that less frequent testing is adequate. However, at a minimum, the AWFCO system and associated alarms must be tested at least monthly. The AWFCO system for the ~~HAF incinerator~~ resides in the distributed control system (DCS). The DCS performs the test for all the alarm circuits almost continuously.

## **DCS Architecture**

The DCS is a digital process control and data acquisition system that consists of standard modular building blocks. The individual blocks are linked together by redundant cable, which comprises universal control networks (UCNs). Each module functionally stands alone to perform its pre-programed tasks. Together the modules provide distributed control and centralized monitoring capabilities so that the operators can recognize and react to situations at all process points in a quick and responsive manner. Built-in automatic diagnostics procedures alert the operator to potential equipment problems, and in many cases, automatically take corrective action to avert the problem.

Two types of modules operate at the process level and are called: 1) high performance process manager (HPM); and 2) Triconics PLC. These devices interface directly with the process measurement devices (e.g., level, flow, pressure, temperature transmitters, etc.). The control functions reside in the HPM (e.g., PID control, valve outputs, etc.). The AWFCO system resides in the Triconics PLC (e.g., waste feed cutoff valves, firebox burner management, etc.). To assure continuous process control, all HPM devices are redundant.

The Triconics is triple redundant to provide fault tolerant operation. Each device monitors the on-line computer and I/O cards continuously for malfunctions. If a malfunction is detected, the operator is notified across the UCN that a problem exists and automatically switches control to the redundant device. Complete control is always maintained.

Both the HPM and Triconics continuously monitor input functions for reasonable values (e.g., module failure, NO converter failure, and PV Range check) and the output functions by a readback check (checks the D/A converter). If a failure is detected, either the HPM or the Triconics will send an alarm to the operator immediately and under certain circumstances it

will automatically switch to the redundant partner. The Triconics also uses three-way voting of the I/O and the processors to provide complete fault tolerant operation. By design, if an output circuit to a control device loses continuity, the control device fails to the fail-safe position. For the liquid feed shutoff valves, this is in the closed position. There are also two valves in series that close to assure positive shutoff.

The HPM communicates with the operator via the UCN. The Triconics communicates through a redundant safety manager onto the same UCN. The UCN consists of two cables connecting all the process devices (HPMs and safety managers) to a network interface module (NIM). All devices on the "highway" continuously check the highway for faults. If a fault is found, the device issues an alarm to the operator and other devices on the highway. All the devices then switch to the redundant cable. To assure that the backup cable does not become damaged while not in use, the data highway automatically switches cables every 5 minutes.

The NIM interfaces the UCN to the local control network (LCN). The LCN is another dual cable data highway that interconnects different devices that are shared between several process networks (e.g., UCNs). For example, operators interface with the process on a universal station. The universal station resides on the LCN. The NIM is a redundant computer module that translates data transmission protocol on the UCN to/from the data transmission protocol on the LCN. The NIM also acts as a "data traffic cop" so that there is orderly data transmission.

Similar to the HPMs, if the active NIM malfunctions, the redundant NIM automatically takes full control of all the other NIM functions and an alarm is sent to the operator.

The LCN is continuously checked for malfunctions by all devices that reside on the LCN. If a device detects a fault on the current cable, it sends out an alarm to the operator and the other devices on the LCN. All devices then switch to the redundant cable. To assure that the backup cable does not become damaged while not in use, the LCN switches cables every 1 minute.

The operator views the process data on a universal station. All alarms are also received at this station. The VCM control room has multiple universal stations to provide sufficient access to the process and redundancy for the stations. Multiple stations are dedicated to the control of the area with the ~~HAFs-incinerators~~.

## **Alarm Checking**

Alarm checking is a task for the Triconics for shutdowns and the HPM for process alarms. When an alarm point is reached, the Triconics will first initiate any interlock actions that may be required. Then the Triconics will send the shutdown alarm signal along the UCN to the NIM. Any process alarms are sent from the HPM to the NIM. The NIM then assigns an alarm priority and sends out the alarm on the LCN to any and all devices that need the information. The universal station will receive the alarm signal and notify the operator by sounding an audible alarm and a LED indication light for the unit with the alarm. Alarm management at this point is very similar to the analog alarm annunciator boards. The operator can silence the alarm and then acknowledge the alarm.

## **AWFCO System Weekly Test Plan**

The alarm circuit path described above is continuously checked through extensive diagnostic programs on several computer devices. If a failure is found, as stated above, an alarm is sent to the operator immediately and, where appropriate, the system takes action to avert a problem that may be caused by the malfunction. On a weekly basis, this system is monitored at the universal station. The system status menu provides the status of each device on the UCN and LCN.

## **References**

- 1 Honeywell, Reference: System Summary -1 Volume TPS 3010-1, System Overview, Publication SW70-500, 1995.
- 2 Honeywell, Reference: System Summary -2 Volume TPS 3010-2, High Performance Process Manager Specification and Technical Data, Publication HP03-500, 1999.
- 3 Honeywell, Reference: System Summary -2 Volume TPS3010-2, TPS Process manager 110 Specification and Technical Data, Publication 1003-500, 1997.
- 4 Triconics, Reference: Tricon Planning & Installation Guide, 1998.



## ~~Appendix C~~

## ~~Closure Plan~~

## **Attachment VI.**

### **Geology Report**

## **Geology Report**

The types of hazardous waste management units addressed by the permit renewal application do not require the inclusion of a geology report. As such, no geology report is included in the section of the application.

## **Attachment VII.A**

### **Facility Closure Plan and Cost Estimates**

**Table VII.A. – Unit Closure**

For each unit to be permitted, list the facility components to be decontaminated, the possible methods of decontamination, and the possible methods of disposal of wastes and waste residues generated during unit closure:

| Equipment of HWM Unit                                        | Possible Method of Decontamination <sup>1</sup>                             | Possible Methods of Disposal <sup>1</sup>                                                      |
|--------------------------------------------------------------|-----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| VCM CSA slab                                                 | Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes | Onsite via <u>combustion</u><br><del>incineration</del> or wastewater treatment and/or offsite |
| Tank C-720A slab                                             | Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes | Onsite via <u>combustion</u><br><del>incineration</del> or wastewater treatment and/or offsite |
| Tank C-720B slab                                             | Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes | Onsite via <u>combustion</u><br><del>incineration</del> or wastewater treatment and/or offsite |
| Tank C-720A                                                  | Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes | Onsite via <u>combustion</u><br><del>incineration</del> or wastewater treatment and/or offsite |
| Tank C-720B                                                  | Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes | Onsite via <u>combustion</u><br><del>incineration</del> or wastewater treatment and/or offsite |
| Tank C-720A ancillary equipment                              | Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes | Onsite via <u>combustion</u><br><del>incineration</del> or wastewater treatment and/or offsite |
| Tank C-720B ancillary equipment                              | Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes | Onsite via <u>combustion</u><br><del>incineration</del> or wastewater treatment and/or offsite |
| <u>Halogen Acid Furnace</u><br><del>Incinerator</del> CCIN-1 | Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes | Onsite via <u>combustion</u><br><del>incineration</del> or wastewater treatment and/or offsite |
| <u>Halogen Acid Furnace</u><br><del>Incinerator</del> CCIN-2 | Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes | Onsite via <u>combustion</u><br><del>incineration</del> or wastewater treatment and/or offsite |



| Equipment of HWM Unit                                               | Possible Method of Decontamination <sup>1</sup>                             | Possible Methods of Disposal <sup>1</sup>                                        |
|---------------------------------------------------------------------|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| <u>Halogen Acid Furnace Incinerator</u> CCIN-1 ancillary equipment  | Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes | Onsite via <u>combustion incineration</u> or wastewater treatment and/or offsite |
| <u>Halogen Acid Furnace Incinerator</u> CCIN-21 ancillary equipment | Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes | Onsite via <u>combustion incineration</u> or wastewater treatment and/or offsite |

1. Applicants may list more than one appropriate method.

**Table VII.E.1. - Permitted Unit Closure Cost Summary**

| Existing Unit Closure Cost Estimate                    |           |             |
|--------------------------------------------------------|-----------|-------------|
| Unit                                                   |           | Cost        |
| VCM Container Storage Area                             |           | \$159,937   |
| Tank C-720A                                            |           | \$1,148,730 |
| Tank C-720B                                            |           | \$1,148,730 |
| Secondary Containment for Tanks                        |           | \$199,665   |
| Halogen Acid Furnace CCIN-1                            |           | \$185,076   |
| Halogen Acid Furnace CCIN-2                            |           | \$185,076   |
| Total Existing Unit Closure Cost Estimate <sup>1</sup> | Year 2024 | \$3,027,214 |

| Proposed Unit Closure Cost Estimate                |  |      |
|----------------------------------------------------|--|------|
| Unit                                               |  | Cost |
|                                                    |  |      |
|                                                    |  |      |
|                                                    |  |      |
|                                                    |  |      |
|                                                    |  |      |
|                                                    |  |      |
| Total Proposed Unit Closure Cost Estimate Footnote |  |      |

1 As units are added or deleted from these tables through future permit amendments or modifications, the remaining itemized unit costs should be updated for inflation when re-calculating the revised total cost in current dollars.

# **Attachment VII.A**

## **Facility Closure Plan**

**OxyChem**  
**Ingleside, Texas**

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## 1.0 Introduction

OxyChem operates a chemical production facility in Ingleside, Texas. As such, the facility has various onsite units subject to RCRA permitting that support operations. This Facility Closure Plan has been provided pursuant to the requirements of 40 CFR Part 264.112 to outline the procedures for closure of the entire RCRA facility. RCRA closure plans for individual units are provided in this application as ~~appendices associated with the individual unit engineering reports in~~ Attachments ~~VII.A.1 (VCM CSA)B.1, VII.A.2 (Tank C-720A).C.1, VII.A.3 (Tank C-720B).C.2, VII.A.4 (HAF CCIN-1).I.1, and VII.A.5 (HAF CCIN-2).I.2~~. Those plans detail how specific units will be closed, and this plan outlines how the RCRA facility (i.e., all active RCRA permitted units) would be closed.

This Facility Closure Plan and the individual unit closure plans have been prepared to address the following regulatory requirements:

- Closure requirements - 40 CFR Part 264, Subpart G;
- Closure requirements for container storage areas - 40 CFR 264.178;
- Closure requirements for tanks - 40 CFR 264.197;
- Closure requirements for boilers and industrial furnaces - 40 CFR 266.102(a)(2)(vii);
- Closure and Remediation - 30 TAC 335.8; and
- Texas Risk Reduction Program (TRRP) - 30 TAC Chapter 350.

This Facility Closure Plan and the individual unit closure plans detail closure procedures that:

- Minimizes the need for further maintenance;
- Controls, minimizes, or eliminates post-closure escape of hazardous waste, constituents, leachate, contaminated run-off, or waste decomposition to the ground, surface waters, or atmosphere (to the extent necessary to protect human health and the environment);
- Hazardous waste and hazardous waste residues will be removed from the unit; and
- Complies with the above regulatory requirements for closure.



## 2.0 Unit and Waste Descriptions

Descriptions of hazardous waste management units and wastes managed within those units are provided in the individual closure plans contained in ~~the unit engineering reports in~~ Attachments VII.A.1 through VII.A.5~~V.B.1, V.C.1, V.C.2, V.I.1, and V.I.2.~~

### 3.0 Closure Plan

Closure activities for individual units are specified in the closure plans contained in ~~the unit engineering reports in~~ Attachments VII.A.1 through VII.A.5~~V.B.1, V.C.1, V.C.2, V.I.1, and V.I.2~~. During final RCRA facility closure, the closure plans associated with active RCRA units would be implemented to achieve final facility closure. As such, the plan for facility closure is to aggregate the unit closure plans for the active units. The aggregated closure plan provides for the following:

- Closure plans that outline specific procedures, which can be implemented at any point in the unit or facility's life;
- Descriptions of how each unit will be closed;
- Description of how the facility would be closed with maximum extent of operations being defined to include all active, permitted RCRA hazardous waste management units;
- The maximum inventory of hazardous waste is the sum of the maximum inventories specified for the individual units; and
- Detailed closure procedures and performance standards are specified in unit closure plans.

## **4.0 Notification of Closure Activities**

OxyChem will notify TCEQ in writing of closure activities at least 45 days prior to the date on which final facility closure is expected to commence. Such notification will be sent to both the TCEQ Central Office and the appropriate TCEQ District Office. OxyChem will also notify TCEQ in writing at least 10 days before beginning field activities or sampling to afford TCEQ personnel the opportunity to observe closure activities and/or split samples.

## 5.0 Closure Certification

Once closure of all units is complete, facility units closed during final facility closure will be inspected by OxyChem and an independent Professional Engineer (P.E.) licensed in the State of Texas. Within 60 days of completing closure of units closed during facility closure, OxyChem will submit to the Executive Director of the TCEQ (by registered mail) a certification from the ~~is~~-independent P.E. that the facility was closed in accordance with the specifications contained in the approved Facility Closure Plan. In addition, this certification, signed by both a facility representative and an independent P.E., will include documentation supporting the P.E.'s certification.

The closure certification report will include and be supported by unit closure certification reports containing:

- A summary of closure activities performed;
- Locations of where verification, concrete, and soil samples were taken; and
- Results of analyses for all of the verification samples, concrete samples, and soil samples.

Drawings included in the reports will identify sample locations and depths with identification numbers that are cross-referenced to sample results. In addition, reports will include the results of visual inspections performed both during and after closure.

## 6.0 Permit Modification

If a change in the approved closure plan is required, OxyChem will submit a permit modification to the TCEQ requesting authorization of a change in the plan. Such a modification will occur, at a minimum, under the following circumstances:

- Changes in operating plans or facility design that affect the closure plan;
- There is a change in the expected year of closure; and/or
- During closure activities, unexpected events require modification of the approved closure plan.

In addition, if the Executive Director requests modifications to the Closure Plan, OxyChem will submit these modifications within 60 days of the Executive Director's request or within 30 days if changes occur during the closure.



## 7.0 Closure Schedule

Schedules for unit closures are specified in unit closure plans and would be implemented concurrently (to the extent possible) to achieve facility closure. The estimated facility closure schedule would require 180 days to complete.

This schedule does not account for delays that may be caused by force majeure, including without limitations, fires, floods, riots, or strikes. If any of the aforementioned circumstances occur, OxyChem will submit a written request to the Executive Director of the TCEQ to extend the time allowed for closure.

## 8.0 Closure Cost Estimates

Estimated closure costs are reflected in the individual unit closure plans in Attachments VII.A.1 through VII.A.5~~V.B.1, V.C.1, V.C.2, V.I.1, and V.I.2.~~

## **Attachment VII.A.1**

### **VCM Container Storage Area**

### **Closure Plan and Cost Estimate**

**OxyChem**  
**Ingleside, Texas**

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## 1.0 Introduction

OxyChem operates a chemical production facility in Ingleside, Texas. In conjunction with these activities, a variety of hazardous wastes are generated at the facility. In support of hazardous waste management, the VCM Container Storage Area is a permitted container storage area used to store hazardous waste for greater than 90 days. As such, it is subject to RCRA Part B permitting requirements for closure, which are addressed in this Closure Plan.

This Closure Plan has been prepared to address the following regulatory requirements:

- Closure requirements - 40 CFR Part 264, Subpart G;
- Closure requirements for container storage areas - 40 CFR 264.178;
- Closure and Remediation - 30 TAC 335.8; and
- Texas Risk Reduction Program (TRRP) - 30 TAC Chapter 350.

The VCM Container Storage Area Report, which contains design drawings of the unit, is provided as Attachment V.B.1 of this application. Other information (e.g., operational, compliance, etc.) regarding the unit is also provided in the unit report (Attachment V.B.1). Under procedures detailed herein, OxyChem will close the VCM Container Storage Area in a manner that:

- Minimizes the need for further maintenance;
- Controls, minimizes, or eliminates post-closure escape of hazardous waste, constituents, leachate, contaminated run-off, or waste decomposition to the ground, surface waters or atmosphere (to the extent necessary to protect human health and the environment);
- Hazardous waste and hazardous waste residues will be removed from the unit; and
- Complies with the above regulatory requirements for closure.

A description of the VCM Container Storage Area is contained in Section 2.0, and as mentioned above, detailed descriptions of unit design and operation are provided in other attachments.



Closure procedures for the unit are described in Section 3.0 with specific steps necessary to perform the closure found in Section 3.3. Sections 7.0 and 8.0 reflect the closure schedule as well as closure cost estimate.

## 2.0 Unit and Waste Descriptions

As described, OxyChem operates the VCM Container Storage Area, which is subject to permitting standards. The unit is used to manage waste streams, which are classified as RCRA hazardous. Since the unit can store any wastes managed at the facility, it would manage all wastes reflected in the Waste Analysis Plan (Attachment IV. ~~DB~~).

Based on waste characterization information for these waste streams, primary constituents are those reflected in Table 1.

### 3.0 Closure Plan

Activities specified in this section are for closure of the VCM Container Storage Area. Activities necessary for final facility closure per the requirements of 40 CFR 264.112(b) are specified in the Facility Closure Plan (Attachment VII.A of this application).

#### 3.1 Closure Scenario

It is expected that closure activities described in this plan will be performed by OxyChem personnel and/or its contractors. However, closure costs reflected in this plan are based on the "worst-case" closure requirements of 40 CFR §264.142 and TCEQ recommendations contained in the Industrial Solid Waste Technical Guideline No. 10 (12/7/2017). As such, closure costs are based upon closure of the facility by a third-party at the point in time in the facility's active life when the extent and manner of its operation would make closure most expensive.

#### 3.2 Oversight by a Professional Engineer

Closure activities will be supervised by OxyChem personnel as well as a professional engineer (P.E.) licensed in the State of Texas. Following completion of closure, the P.E. will prepare a closure certification report in accordance with the criteria specified in Section 5.

The VCM Container Storage Area is constructed with a reinforced concrete slab. The P.E. certifying closure will visually inspect the unit and associated concrete slab and surrounding areas prior to beginning closure activities to determine candidate locations for sampling soils. Items to be noted during the visual inspection include, but are not limited to the following:

- Indication of leaks;
- Significant stained areas;
- Condition of seams and expansion joints;
- Cracks in the concrete in the vicinity of the unit; and
- Location of drain piping and/or sumps.

Based on the visual inspection, the P.E. will determine locations for collection of soil samples. If, during inspection of the concrete surfaces, areas with significant damage (e.g., separated concrete, extensive concrete patching, etc.) are observed, the P.E. will collect concrete

samples (in addition to soil) from these locations. The P.E. will review closure activities and certify that closure was completed according to the approved closure plan.

### 3.3 Closure Procedures

OxyChem intends to "clean close" the VCM Container Storage Area in accordance with all relevant closure requirements. The approach for closure will consist of removal and/or decontamination of waste and waste residues, contaminated containment system components, contaminated soils (if any), and structures and equipment contaminated with wastes. At this time, OxyChem does not anticipate beginning closure of these units until after the year 2040. Further details regarding closure procedures proposed are described in the following sections.

The procedures for closure of the VCM Container Storage Area will include the following steps.

- Step 1 - Removal of waste and waste residues (including disposal of rinsate);
- Step 2 - Collection of verification samples;
- Step 3 - Collection of concrete (if required) and soil samples;
- Step 4 - Equipment decontamination; and
- Step 5 - Demonstration that TRRP requirements have been met (if a release has occurred).

#### Step 1 - Removal of Waste and Waste Residues

As part of the closure activities for the VCM Container Storage Area, waste present in containers in the unit and any waste residues that may be present will be removed from the unit. Containers will be removed from the unit and transported to an authorized facility for subsequent management.

After removal of the waste containers, the VCM Container Storage Area will be taken out of service for further decontamination, which will consist of decontamination of the concrete slab surfaces. Decontamination will be performed using water rinsing and/or abrasive removal.

Water rinsing would consist of a high-pressure wash or other appropriate method such as, but not limited to detergent wash and/or chemical wash. Concrete slab surfaces will be decontaminated by rinsing each surface three times (i.e., triple rinsing). Rinsewater will be

potable, service, and/or deionized water. Rinsewater will be collected in containers (e.g., tank trucks, frac tanks, drums, etc.) and properly disposed of depending on its waste classification and LDR status.

In lieu of water rinsing, concrete slab surfaces may be decontaminated using abrasive removal. Abrasive removal would consist of using a blasting media (e.g., sand, plastic bead, slag, etc.) and/or physical removal (e.g., scraping, sanding, etc.). Decontamination will be accomplished when visible residue has been removed. Waste blast material (i.e., blasting media and/or removed residue) will be collected in containers (e.g., drums, roll-offs, etc.) and properly disposed of depending on its waste classification and LDR status. Multiple blasting events may be performed to achieve visual decontamination.

## **Step 2 - Collection of Verification Samples**

After visible signs of contamination are removed as described in Step 1, OxyChem will collect verification samples to demonstrate that removal of all waste residues has occurred and decontamination has been achieved. If water rinsing is used to achieve decontamination, verification samples will be collected from the final rinsate. If abrasive removal is used to achieve decontamination, verification samples will be collected from either the final batch of blast material or from wipe samples of the decontaminated surfaces.

Verification samples will be analyzed for the hazardous constituents identified in Table 1, which have been selected as representative of constituents in wastes managed in the unit. Analytical results from verification samples will first be assessed to determine if any constituents are detected. If no constituents are detected in the samples, the unit will be considered decontaminated. If constituents are detected, their levels will be compared to the Tier 1 protective concentration levels (PCLs) for residential land use specified in TRRP. If levels are below Tier 1 residential PCLs, the unit will be considered decontaminated. If analytical results do not reflect that the unit has been decontaminated, Steps 1 and 2 may be repeated until specified cleanup criteria are met.

As an alternate to decontamination, OxyChem may elect, based on sample results, to remove and dispose of contaminated structures to achieve closure. Should the facility elect to achieve closure through removal and disposal, all relevant RCRA management procedures (e.g., waste classification, manifesting, LDR requirements, etc.) will be met.

## **Step 3 - Collection of Concrete and Soil Samples**



To verify that a release has not occurred from the unit, soil samples will be collected. Further, if the P.E. determines that samples should be collected, they will be obtained per the procedures reflected below. The following procedures will be used for collection of samples from each material.

### **Concrete Samples**

If concrete samples are collected from the concrete slab associated with the unit, the decision to collect them will be made by the supervising P.E. based on the visible inspection of concrete. As reflected in Section 3.2, the P.E. will be looking for areas that exhibit signs of significant damage.

Concrete samples would be analyzed for the presence of the hazardous constituents listed in Table 1. If no constituents are detected in the concrete sample(s), the concrete will be considered clean. If constituents are detected, measured values will be compared with waste classification and TRRP levels to determine disposition of the concrete.

In the event analysis of concrete samples indicates that the concentration of constituents do not meet the criteria for clean closure (i.e., Tier 1 residential PCLs), OxyChem may also determine if the delineated sampling areas were representative of the entire concrete pad or if additional samples will be required to obtain a defined characterization of the extent of contamination.

### **Soil Samples**

To determine if soil has been contaminated with hazardous wastes or hazardous constituents, soil samples will be collected in the vicinity of the unit. At least two soil samples will be obtained from soils under or in close proximity to (i.e., near the edge of) the concrete. The decision to collect more than two soil samples will be made by the supervising P.E. based on the visible inspection of the concrete. As reflected in Section 3.2, the P.E. will be looking for areas that exhibit signs of contamination, staining, or deterioration.

Soil samples will be analyzed for the presence of hazardous constituents listed in Table 1. If no constituents are detected in the soil sample(s), a determination will be made that no release has occurred from the unit. If constituents are detected, measured values will be assessed in accordance with TRRP to determine appropriate action. If levels are below Tier 1 residential PCLs, a determination will be made that no releases to soil have occurred.

In the event analysis of soil samples indicates that the concentration of constituents do not meet the criteria for clean closure (i.e., are above Tier 1 residential PCLs), OxyChem may also determine if the delineated sampling areas were representative of the entire area or if additional samples will be required to obtain a defined characterization of the extent of contamination.

#### **Step 4 - Equipment Decontamination**

Non-disposable equipment used during closure that comes in contact with the waste material will be decontaminated using water and non-ionic soap followed by a potable, service, and/or deionized water rinse. Disposable equipment will be disposed of at an authorized facility.

Equipment or system component that cannot be cleaned may also be disposed of at an authorized facility. Washwater will be directed to a sump or a temporary collection point (e.g., vacuum truck) and transferred to an authorized facility.

Non-disposable sampling equipment will be cleaned prior to collection of any samples and after the collection of each sample using a detergent and deionized or distilled water wash followed by a deionized or distilled water rinse.

#### **Step 5 - TRRP Demonstration**

If, through analysis of soil samples, it is determined that a release from the unit has occurred to underlying soils, then a demonstration of compliance with TRRP will be performed. This includes preparation of all applicable reports and demonstration that the remedy standard has been met. If a release has occurred, the objective will be to meet Remedy Standard A criteria to achieve clean closure. In the event that Remedy Standard A criteria cannot be met and Remedy Standard B is performed, OxyChem will obtain all required TRRP and RCRA approvals/authorizations.

## 4.0 Notification of Closure Activities

OxyChem will notify TCEQ in writing of closure activities at least 45 days prior to the date on which the facility expects final closure to commence. Such notification will be sent to both the TCEQ Central Office and the appropriate TCEQ District Office. OxyChem will also notify TCEQ in writing at least 10 days before beginning field activities or sampling to afford TCEQ personnel the opportunity to observe closure activities and/or split samples.

## 5.0 Closure Certification

Once closure of the VCM Container Storage Area is complete, the unit will be inspected by OxyChem and an independent P.E. licensed in the State of Texas. Within 60 days of completing closure of the unit, OxyChem will submit to the Executive Director of the TCEQ (by registered mail) a certification from this independent P.E. that the unit was closed in accordance with the specifications contained in the approved Closure Plan. In addition, this certification, signed by both a facility representative and an independent P.E., will include documentation supporting the P.E.'s certification.

The closure certification report will include:

- A summary of closure activities performed;
- Locations of where verification, concrete (if collected), and soil samples were taken; and
- Results of analyses for all of the verification samples, concrete samples (if collected), and soil samples.

Drawings included in the report will identify sample locations and depths with identification numbers that are cross-referenced to sample results. In addition, the report will include the results of visual inspections performed both during and after closure.

## 6.0 Permit Modification

If a change in the approved closure plan is required, OxyChem will submit a permit modification to the TCEQ requesting authorization of a change in the plan. Such a modification will occur, at a minimum, under the following circumstances:

- Changes in operating plans or facility design that affect the closure plan;
- There is a change in the expected year of closure; and/or
- During closure activities, unexpected events require modification of the approved closure plan.

In addition, if the Executive Director requests modifications to the Closure Plan, OxyChem will submit these modifications within 60 days of the Executive Director's request or within 30 days if changes occur during the closure.



## 7.0 Closure Schedule

A closure schedule for the unit is provided in Table 2. This table also indicates the estimated number of days required to complete each step of the closure task. The total number of days anticipated to close the VCM Container Storage Area following notification to the TCEQ is 115 days.

This schedule does not account for delays that may be caused by force majeure, including without limitations, fires, floods, riots, or strikes. If any of the aforementioned circumstances occur, OxyChem will submit a written request to the Executive Director of the TCEQ to extend the time allowed for closure.

## 8.0 Closure Cost Estimate

Estimated closure costs for the VCM Container Storage Area are detailed in Table 3 and supporting information for the estimates is provided in Appendix A. The estimated costs for closure of the unit were updated with a July 2020 permit modification and subsequently reviewed and approved by TCEQ. Estimates were developed in accordance with the requirements set forth in 40 CFR 264.142 and TCEQ recommendations contained in the Industrial Solid Waste Technical Guideline No. 10 (12/7/2017). As such, this estimate reflects "worst case" conditions at the time of closure. The Table 3 cost estimates are based on the 2019 values that have been updated using the inflation factors for 2020 to 2024 ( $1.012 \times 1.042 \times 1.070 \times 1.036 \times 1.024 = 1.197$ ), which results in a multiplier of 1.197.

Activities reflected in this estimate may differ somewhat from the activities that would be conducted by a closure led by OxyChem. In addition, this cost estimate is based on the fact that these facilities are constructed on a concrete slab and that the facility has had no record of a release to the environment. The following summarizes the basis of the closure cost estimates:

- Closure will commence at a point in the facility's operating life when closure is the most expensive;
- Closure is based on abandonment of the site at full capacity;
- Closure activities are performed by a third party;
- The units are at capacity at the time of closure;
- Containment will prevent entry of rainwater into the closure area during stormwater events;
- The hazardous waste units and concrete will be cleaned using high pressure/steam cleaning;
- For each sampling event, one sample will be collected from each hazardous waste unit and the rinsewater;

- It is assumed that the units will be triple rinsed and then samples collected and analyzed;
- It is assumed that two concrete and two soil samples will be collected and analyzed to determine potential contamination of concrete and soil;
- Liquid waste and washwaters will be disposed offsite; and
- Solid and sludge wastes will be shipped offsite for disposal at an authorized TSD facility.

## Tables

**Table 1 Sample Analysis Methods**

| Unit    | Constituents          | EPA Analytical Methods |
|---------|-----------------------|------------------------|
| VCM CSA | Volatile Organics     | SW-846 8260            |
| VCM CSA | Semivolatile Organics | SW-846 8270            |

**Table 2 Closure Schedule**

| Activity                                                    | Schedule (days)     |
|-------------------------------------------------------------|---------------------|
| Notify TCEQ of closure                                      | 45 (prior to start) |
| <b>Closure activities begin – after 45 day notification</b> |                     |
| Remove wastes                                               | 5                   |
| Decontaminate unit                                          | 4                   |
| Collect rinsate, concrete (if collected), and soil samples  | 3                   |
| Analyze rinsate, concrete (if collected), and soil samples  | 21                  |
| Re-rinse, resamples, and reanalyze, if necessary            | 22                  |
| Prepare certification of closure report                     | 60                  |
| Total number of days for closure                            | 115                 |

**Table 3 Closure Cost Estimate for VCM Container Storage Area**

| Task                                    | Cost      |
|-----------------------------------------|-----------|
| Removal and Disposal of Waste           | \$120,390 |
| Decontamination of Slab                 | \$10,319  |
| Equipment Decontamination               | \$2,236   |
| Verification Sampling                   | \$10,388  |
| Engineering Inspection/Supervision      | \$2,064   |
| Subtotal:                               | \$145,397 |
| 10% Contingency                         | \$14,540  |
| Total Unit Closure Cost (2024 Dollars): | \$159,937 |



## Appendix A

### Supporting Information for Closure Cost Estimate

### Closure Cost Estimate for VCM CSA

| Activity                                                                                                                  | Estimated Cost, \$K <sup>1</sup> |
|---------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| <b>Waste removal and disposal of drums</b>                                                                                | \$70                             |
| 3 hrs of labor @ \$185/hr                                                                                                 |                                  |
| 168 drums @ \$400/drum disposal (as a hazardous waste)                                                                    |                                  |
| 2 trip @ \$1,348/trip transportation                                                                                      |                                  |
| <b>Decontaminate CSA with water and detergent flush with off-site hazardous waste disposal of all rinsate<sup>2</sup></b> | \$6                              |
| 16 hrs of labor @ \$185/hr                                                                                                |                                  |
| 646 gallons of washwater @ \$1.67/gallon                                                                                  |                                  |
| 5,388 lbs of washwater for disposal                                                                                       |                                  |
| 1 trip @ \$1,348/trip transportation @ \$0.20/lb                                                                          |                                  |
| <b>Decontaminate clean-up equipment</b>                                                                                   | \$1.3                            |
| <b>Sample, excavate, and dispose of surrounding soils as HW</b>                                                           | \$20                             |
| 12 hrs of labor @ \$185/hr                                                                                                |                                  |
| 1 day backhoe rental @ \$1,200/day                                                                                        |                                  |
| 23,760 pounds @ \$0.65/lb <sup>3</sup>                                                                                    |                                  |
| 1 trip @ \$1,348/trip                                                                                                     |                                  |
| <b>Laboratory charges</b>                                                                                                 | \$5                              |
| 2 water samples @ \$215 per analysis                                                                                      |                                  |
| 4 soil samples @ \$1,035 per analysis                                                                                     |                                  |
| <b>Engineer's inspection and certification</b>                                                                            | \$1.2                            |
| 10 hrs labor @ \$115/hr                                                                                                   |                                  |
| <b>Subtotal</b>                                                                                                           | \$104                            |
| <b>25% Contingency</b>                                                                                                    | \$26                             |
| <b>VCM CSA Total</b>                                                                                                      | \$130                            |

<sup>1</sup> 2000 Dollars.

<sup>2</sup> An estimated 0.75 gallons per square foot of washwater will be needed to decontaminate the CSA secondary containment slab.

<sup>3</sup> See Appendix VII.A.-1 calculations for this volume.

## **Attachment VII.A.2**

### **Tank C-720A**

### **Closure Plan and Cost Estimate**

**OxyChem**  
**Ingleside, Texas**

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## 1.0 Introduction

OxyChem operates a chemical production facility in Ingleside, Texas. In conjunction with these activities, a variety of hazardous waste streams are generated at the facility. In support of hazardous waste management, Tank C-720A is a permitted tank used to store hazardous waste for greater than 90 days. As such, it is subject to RCRA Part B permitting requirements for closure, which are addressed in this Closure Plan.

This Closure Plan has been prepared to address the following regulatory requirements:

- Closure requirements - 40 CFR Part 264, Subpart G;
- Closure requirements for tanks - 40 CFR 264.197;
- Closure and Remediation - 30 TAC 335.8; and
- Texas Risk Reduction Program (TRRP) - 30 TAC Chapter 350.

The Tank C-720A Report, which contains design drawings of the unit, is provided as Attachment V.C.1 of this application. Other information (e.g., operational, compliance, etc.) regarding the tank is also provided in the unit report (Attachment V.C.1). Under procedures detailed herein, OxyChem will close Tank C-720A in a manner that:

- Minimizes the need for further maintenance;
- Controls, minimizes, or eliminates post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground, surface waters or atmosphere (to the extent necessary to protect human health and the environment);
- Hazardous waste and hazardous waste residues will be removed from the unit; and
- Complies with the above regulatory requirements for closure.

A description of Tank C-720A is contained in Section 2.0, and as mentioned above, detailed descriptions of tank design and operation are provided in other attachments. Closure procedures for the unit are described in Section 3.0 with specific steps necessary to perform the closure found in Section 3.3. Sections 7.0 and 8.0 reflect the closure schedule as well as closure cost estimate.



## 2.0 Unit and Waste Descriptions

As described, OxyChem operates Tank C-720A, which is subject to permitting standards. The tank is used to manage waste streams, which are classified as RCRA hazardous. Tank C-720A is an elevated, spherical tank with a nominal capacity of 65,000 gallons. The tank collects and stores hazardous wastes generated from both onsite and offsite sources prior to subsequent treatment in one of two onsite ~~Halogen Acid Furnaces incinerators~~ (CCIN-1 and CCIN-2) . Tank C-720A handles the following wastes:

- Waste oil;
- VCM heavy ends;
- VCM light ends;
- Mother liquor; and
- EDC heavy ends.

Based on expected waste characterization information for these waste streams, primary constituents are those reflected in Table 1.

### 3.0 Closure Plan

Activities specified in this section are for closure of Tank C-720A. Activities necessary for final facility closure per the requirements of 40 CFR 264.112(b) are specified in the Facility Closure Plan (Attachment VII.A of this application).

#### 3.1 Closure Scenario

It is expected that closure activities described in this plan will be performed by OxyChem personnel and/or contractors selected by the facility. However, closure costs reflected in this plan are based on the "worst-case" closure requirements of 40 CFR 264.142 and TCEQ recommendations contained in the Industrial Solid Waste Technical Guideline No. 10 (12/7/2017). As such, closure costs are based upon closure of the facility by a third-party at the point in time in the facility's active life when the extent and manner of its operation would make closure most expensive.

#### 3.2 Oversight by a Professional Engineer

Closure activities will be supervised by OxyChem personnel as well as an independent professional engineer (P.E.) licensed in the State of Texas. Following completion of closure, the P.E. will prepare a closure certification report in accordance with the criteria specified in Section 5.

Tank C-720A will be located within a secondary containment vault/external liner. The P.E. certifying closure will visually inspect the unit and associated concrete vault/liner and surrounding areas prior to beginning closure activities to determine candidate sampling locations for soils. Items to be noted during the visual inspection include, but are not limited to the following:

- Indication of leaks;
- Significant stained areas;
- Condition of seams and expansion joints;
- Cracks in the concrete in the vicinity of the unit; and
- Location of drain piping and/or sumps.

Based on the visual inspection, the P.E. will determine locations for collection of soil samples. If, during inspection of the concrete surfaces, areas with significant damage (e.g.,

separated concrete, extensive concrete patching, etc.) are observed, the P.E. will collect concrete samples (in addition to soil) from these locations. The P.E. will review closure activities and certify that closure was completed according to the approved closure plan.

### 3.3 Closure Procedures

OxyChem intends to "clean close" Tank C-720A in accordance with all relevant closure requirements. The approach for closure will consist of removal and/or decontamination of waste and waste residues, contaminated containment system components, contaminated soils (if any), and structures and equipment contaminated with wastes. At this time, OxyChem does not anticipate beginning closure of these units until after the year 2040. Further details regarding proposed closure procedures are described in the following sections.

The procedures for closure of Tank C-720A will include the following steps.

- Step 1 - Removal of waste and waste residues (including disposal of rinsate);
- Step 2 - Collection of verification samples;
- Step 3 - Collection of concrete (if required) and soil samples;
- Step 4 - Equipment decontamination; and
- Step 5 - Demonstration that TRRP requirements have been met (if a release has occurred).

#### Step 1 - Removal of Waste and Waste Residues

As part of the closure activities for the tank, waste or waste residues that may be present will be removed from the following components:

- Tank interior;
- Piping and ancillary equipment; and
- Concrete surfaces of the secondary containment system/secondary containment shell.

Removal of waste residues that may be present will first be accomplished by pumping remaining waste that may be present in the unit, piping, and ancillary equipment into containers for subsequent management at an authorized facility. Waste stream piping will then be purged back to its source and disconnected from the tank.

After these initial activities, the tank will be taken out of service for further decontamination, which will consist of removal of waste residues (e.g., removal of any sludge in the tank) and decontamination of tank interior surfaces through rinsing and/or abrasive removal (e.g., scraping, blasting, pressure rinsing, etc.). Any sludge present in the tank will be removed, placed in containers, and disposed of at an authorized facility.

Decontamination will be performed using water rinsing and/or abrasive removal. Water rinsing would consist of a high-pressure wash or other appropriate method such as, but not limited to, detergent wash and/or chemical wash. Surfaces (e.g., piping interior, tank interior, and concrete slab) will be decontaminated by rinsing each surface three times (i.e., triple rinsing). Rinsewater will be potable, service, and/or deionized water. Piping and ancillary equipment will be decontaminated by rinsing with a minimum of three piping volumes of rinsewater through the piping system with rinsewater being collected in containers (e.g., tank trucks, frac tanks, drums, etc.) and properly disposed of depending on its waste classification and LDR status.

In lieu of water rinsing, surfaces (e.g., piping interior, tank interior, concrete surface) may be decontaminated using abrasive removal. Abrasive removal would consist of using a blasting media (e.g., sand, plastic bead, slag, etc.) and/or physical removal (e.g., scraping, sanding, etc.). Decontamination will be accomplished when visible residue has been removed. Waste blast material (i.e., blasting media and/or removed residue) will be collected in containers (e.g., drums, roll-offs, etc.) and properly disposed of depending on its waste classification and LDR status. Multiple blasting events may be performed to achieve visual decontamination.

## **Step 2 - Collection of Verification Samples**

After visible signs of contamination are removed as described in Step 1, OxyChem will collect verification samples to demonstrate that removal of all waste residues has occurred and decontamination has been achieved. If water rinsing is used to achieve decontamination, verification samples will be collected from the final rinsate. If abrasive removal is used to achieve decontamination, verification samples will be collected from

either the final batch of blast material or from wipe samples of the decontaminated surfaces. One verification sample will be collected from each activity (i.e., one from decontamination of piping, one from decontamination of tank interior, and one from decontamination of concrete surface).

Verification samples will be analyzed for the hazardous constituents identified in Table 1, which have been selected as representative of constituents in wastes managed in the tank. Analytical results from verification samples will first be assessed to determine if any constituents are detected. If no constituents are detected in the samples, the unit will be considered decontaminated. If constituents are detected, their levels will be compared to the Tier 1 protective concentration levels (PCLs) for residential land use specified in TRRP. If levels are below Tier 1 residential PCLs, the unit will be considered decontaminated. If analytical results do not reflect that the unit has been decontaminated, Steps 1 and 2 may be repeated until specified cleanup criteria are met.

As an alternate to decontamination, OxyChem may elect, based on sample results, to remove and dispose of contaminated structures to achieve closure. Should OxyChem elect to achieve closure through removal and disposal, all relevant RCRA management procedures (e.g., waste classification, manifesting, LDR requirements, etc.) will be met.

### **Step 3 - Collection of Concrete and Soil Samples**

To verify that a release has not occurred from the unit, soil samples will be collected. Further, if the P.E. determines that concrete samples should be collected, they will be obtained per the procedures reflected below. The following procedures will be used for collection of samples from each material.

#### **Concrete Samples**

If concrete samples are collected from the concrete slab associated with the tank, the decision to collect them will be made by the supervising P.E. based on the visible inspection of concrete. As reflected in Section 3.2, the P.E. will be looking for areas that exhibit signs of significant damage.

Concrete samples would be analyzed for the presence of the hazardous constituents listed in Table 1. If no constituents are detected in the concrete sample(s), the concrete will be considered clean. If constituents are detected, measured values will be compared with waste classification and TRRP levels to determine disposition of the concrete.



In the event analysis of concrete samples indicates that the concentration of constituents do not meet the criteria for clean closure (i.e., Tier 1 residential PCLs), OxyChem may also determine if the delineated sampling areas were representative of the entire concrete pad or if additional samples will be required to obtain a defined characterization of the extent of contamination.

### **Soil Samples**

To determine if soil has been contaminated with hazardous wastes or hazardous constituents, soil samples will be collected in the vicinity of the unit. At least two soil samples will be obtained from soils under or in close proximity to (i.e., near the edge of) the concrete. The decision to collect more than two soil samples will be made by the supervising P.E. based on the visible inspection of the concrete. As reflected in Section 3.2, the P.E. will be looking for areas that exhibit signs of contamination, staining, or deterioration.

Soil samples will be analyzed for the presence of hazardous constituents listed in Table 1. If no constituents are detected in the soil sample(s), a determination will be made that no release has occurred from the unit. If constituents are detected, measured values will be assessed in accordance with TRRP to determine appropriate action. If levels are below Tier 1 residential PCLs, a determination will be made that no releases to soil have occurred.

In the event analysis of soil samples indicates that the concentration of constituents do not meet the criteria for clean closure (i.e., are above Tier 1 residential PCLs), OxyChem or the P.E. may also determine if the delineated sampling areas were representative of the entire area or if additional samples will be required to obtain a defined characterization of the extent of contamination.

### **Step 4 - Equipment Decontamination**

Non-disposable equipment used during closure that comes in contact with the waste material will be decontaminated using water and non-ionic soap followed by a potable, service, and/or deionized water rinse. Disposable equipment will be disposed of at an authorized facility. Equipment or system components that cannot be cleaned may also be disposed of at an authorized facility. Washwater will be directed to a sump or a temporary collection point (e.g., vacuum truck) and transferred to an authorized facility.

Non-disposable sampling equipment will be cleaned prior to collection of any samples and after the collection of each sample using a detergent and deionized or distilled water wash followed by a deionized or distilled water rinse.

## **Step 5 - TRRP Demonstration**

If, through analysis of soil samples, it is determined that a release from the unit has occurred to underlying soils, then a demonstration of compliance with TRRP will be performed. This includes preparation of all applicable reports and demonstration that the remedy standard has been met. If a release has occurred, the objective will be to meet Remedy Standard A criteria to achieve clean closure. In the event that Remedy Standard A criteria cannot be met and Remedy Standard B is performed, OxyChem will obtain all required TRRP and RCRA approvals/authorizations.

## 4.0 Notification of Closure Activities

OxyChem will notify TCEQ in writing of closure activities at least 45 days prior to the date on which the facility expects final closure to commence. Such notification will be sent to both the TCEQ Central Office and the appropriate TCEQ District Office. OxyChem will also notify TCEQ in writing at least 10 days before beginning field activities or sampling to afford TCEQ personnel the opportunity to observe closure activities and/or split samples.

## 5.0 Closure Certification

Once closure of Tank C-720A is complete, the unit will be inspected by OxyChem and an independent P.E. licensed in the State of Texas. Within 60 days of completing closure of the unit, OxyChem will submit to the Executive Director of the TCEQ (by registered mail) a certification from this independent P.E. that the unit was closed in accordance with the specifications contained in the approved Closure Plan. In addition, this certification, signed by both a facility representative and an independent P.E., will include documentation supporting the P.E.'s certification.

The closure certification report will include:

- A summary of closure activities performed;
- Locations of where verification, concrete (if collected), and soil samples were taken; and
- Results of analyses for all of the verification samples, concrete samples (if collected), and soil samples.

Drawings included in the report will identify sample locations and depths with identification numbers that are cross-referenced to sample results. In addition, the report will include the results of visual inspections performed both during and after closure.

## 6.0 Permit Modification

If a change in the approved closure plan is required, OxyChem will submit a permit modification to the TCEQ requesting authorization of a change in the plan. Such a modification will occur, at a minimum, under the following circumstances:

- Changes in operating plans or facility design that affect the closure plan;
- There is a change in the expected year of closure; and/or
- During closure activities, unexpected events require modification of the approved closure plan.

In addition, if the Executive Director requests modifications to the Closure Plan, OxyChem will submit these modifications within 60 days of the Executive Director's request or within 30 days if changes occur during the closure.



## 7.0 Closure Schedule

A closure schedule for the unit is provided in Table 2. This table also indicates the estimated number of days required to complete each step of the closure task. The total number of days anticipated to close Tank C-720A following notification to the TCEQ is 112 days.

This schedule does not account for delays that may be caused by force majeure, including without limitations, fires, floods, riots, or strikes. If any of the aforementioned circumstances occur, OxyChem will submit a written request to the Executive Director of the TCEQ to extend the time allowed for closure.

## 8.0 Closure Cost Estimate

Estimated closure costs for Tank C-720A are summarized in Table 3 and supporting information for the estimates is provided in Appendix A. The estimated costs for closure of the tank were updated with a July 2020 permit modification and subsequently reviewed and approved by TCEQ. Estimates were developed in accordance with the requirements set forth in 40 CFR 264.142 and TCEQ recommendations contained in the Industrial Solid Waste Technical Guideline No. 10 (12/7/2017). As such, this estimate reflects "worst case" conditions at the time of closure. The Table 3 cost estimates are based on the 2019 values that have been updated using the inflation factors for 2020 to 2024 ( $1.012 \times 1.042 \times 1.070 \times 1.036 \times 1.024 = 1.197$ ), which results in a multiplier of 1.197.

Activities reflected in this estimate may differ somewhat from the activities that would be conducted by a closure led by OxyChem. In addition, this cost estimate is based on the fact that these facilities are constructed on a concrete slab and that the facility has had no record of a release to the environment. The following summarizes the basis of the closure cost estimates:

- Closure will commence at a point in the facility's operating life when closure is the most expensive;
- Closure is based on abandonment of the site at full capacity;
- Closure activities are performed by a third party;
- The units are at capacity at the time of closure;
- Containment will prevent entry of rainwater into the closure area during stormwater events;
- The hazardous waste units and concrete will be cleaned using high pressure/steam cleaning;
- For each sampling event, one sample will be collected from each hazardous waste unit and the rinsewater;

- It is assumed that the units will be triple rinsed and then samples collected and analyzed;
- It is assumed that two concrete and two soil samples will be collected and analyzed to determine potential contamination of concrete and soil;
- Liquid waste and washwaters will be disposed offsite; and
- Solid and sludge wastes will be shipped offsite for disposal at an authorized TSD facility.

## Tables

**Table 1 Sample Analysis Methods**

| Unit        | Parameters            | EPA Analytical Methods |
|-------------|-----------------------|------------------------|
| Tank C-720A | Volatile organics     | SW-846 8260            |
| Tank C-720A | Semivolatile organics | SW-846 8270            |

**Table 2 Closure Schedule**

| Activity                                                          | Schedule (days)     |
|-------------------------------------------------------------------|---------------------|
| Notify TCEQ of closure                                            | 45 (prior to start) |
| <b>Closure activities begin – after prior 45 day notification</b> |                     |
| Remove wastes                                                     | 3                   |
| Decontaminate unit and concrete                                   | 4                   |
| Collect rinsate, concrete (if collected), and soil samples        | 2                   |
| Analyze rinsate, concrete (if collected), and soil samples        | 21                  |
| Re-rinse, resample, and reanalyze, if necessary                   | 22                  |
| Prepare certification of closure report                           | 60                  |
| Total number of days for closure                                  | 112                 |

**Table 3 Closure Cost Estimate for Tank C-720A**

| Task                                         | Cost        |
|----------------------------------------------|-------------|
| Removal and Disposal of Waste                | \$941,800   |
| Decontamination of Tank and Rinsate Disposal | \$94,360    |
| Equipment Decontamination                    | \$1,197     |
| Verification Sampling                        | \$1,197     |
| Engineering Inspection/Supervision           | \$5,746     |
| Subtotal:                                    | \$1,044,300 |
| 10% Contingency:                             | \$104,430   |
| Total Unit Closure Cost (2024 Dollars):      | \$1,148,730 |

## **Appendix A**

### **Supporting Information for Closure Cost Estimates**



### Closure Cost Estimate for Tank C-720A

| Activity                                                                               | Cost      |
|----------------------------------------------------------------------------------------|-----------|
| <b>Waste Removal and Disposal of Contents</b>                                          |           |
| 18 hours of labor @ \$100/hr (Removal rate of 60 gpm)                                  | \$1,800   |
| 759,000 pounds (65,000 gallons) of waste @ \$1/lb disposal                             | \$759,000 |
| 13 trips @ \$2,000/trip                                                                | \$26,000  |
| Subtotal                                                                               | \$786,800 |
| <b>Decontaminate Tank with Solvent Flush Then Water Flush and Disposal of Rinsates</b> |           |
| 10 hours of labor @ \$100/hr                                                           | \$1,000   |
| 3,250 gallons of solvent @ \$5/gallon                                                  | \$16,250  |
| 27,110 pounds spent solvent @ \$1/lb                                                   | \$27,110  |
| 81,330 lbs washwater @ \$0.35/lb                                                       | \$28,470  |
| 3 trips @ \$2,000/trip                                                                 | \$6,000   |
| Subtotal                                                                               | \$78,830  |
| <b>Decontaminate Equipment</b>                                                         |           |
| 10 hours of labor @ \$100/hr                                                           | \$1,000   |
| Subtotal                                                                               | \$1,000   |
| <b>Laboratory Analysis</b>                                                             |           |
| 2 samples @ \$500/sample                                                               | \$1,000   |
| Subtotal                                                                               | \$1,000   |
| <b>Engineer's Inspection and Certification</b>                                         |           |
| 24 hours of labor @ \$200/hr                                                           | \$4,800   |
| Subtotal                                                                               | \$4,800   |
| <b>Subtotal</b>                                                                        | \$872,430 |
| 10% Contingency                                                                        | \$87,243  |
| <b>TOTAL</b>                                                                           | \$959,673 |

NOTE: All costs are in 2019 dollars

## **Attachment VII.A.3**

**Tank C-720B**

### **Closure Plan and Cost Estimate**

**OxyChem  
Ingleside, Texas**

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## 1.0 Introduction

OxyChem operates a chemical production facility in Ingleside, Texas. In conjunction with these activities, a variety of hazardous waste streams are generated at the facility. In support of hazardous waste management, Tank C-720B is a permitted tank used to store hazardous waste for greater than 90 days. As such, it is subject to RCRA Part B permitting requirements for closure, which are addressed in this Closure Plan.

This Closure Plan has been prepared to address the following regulatory requirements:

- Closure requirements - 40 CFR Part 264, Subpart G;
- Closure requirements for tanks - 40 CFR 264.197;
- Closure and Remediation - 30 TAC 335.8; and
- Texas Risk Reduction Program (TRRP) - 30 TAC Chapter 350.

The Tank C-720B Report, which contains design drawings of the unit, is provided as Attachment V.C.2 of this application. Other information (e.g., operational, compliance, etc.) regarding the tank is also provided in the unit report (Attachment V.C.2). Under procedures detailed herein, OxyChem will close Tank C-720B in a manner that:

- Minimizes the need for further maintenance;
- Controls, minimizes, or eliminates post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground, surface waters or atmosphere (to the extent necessary to protect human health and the environment);
- Hazardous waste and hazardous waste residues will be removed from the unit; and
- Complies with the above regulatory requirements for closure.

A description of Tank C-720B is contained in Section 2.0, and as mentioned above, detailed descriptions of tank design and operation are provided in other attachments. Closure procedures for the unit are described in Section 3.0 with specific steps necessary to perform the closure found in Section 3.3. Sections 7.0 and 8.0 reflect the closure schedule as well as closure cost estimate.

## 2.0 Unit and Waste Descriptions

As described, OxyChem operates Tank C-720B, which is subject to permitting standards. The tank is used to manage waste streams, which are classified as RCRA hazardous. Tank C-720B is an elevated, spherical tank with a nominal capacity of 65,000 gallons. The tank collects and stores hazardous wastes generated from both onsite and offsite sources prior to subsequent treatment in one of two onsite ~~Halogen Acid Furnaces incinerators~~ (CCIN-1 and CCIN-2). Tank C-720B handles the following wastes:

- Waste oil;
- VCM heavy ends;
- VCM light ends;
- Mother liquor; and
- EDC heavy ends.

Based on expected waste characterization information for these waste streams, primary constituents are those reflected in Table 1.

### 3.0 Closure Plan

Activities specified in this section are for closure of Tank C-720B. Activities necessary for final facility closure per the requirements of 40 CFR 264.112(b) are specified in the Facility Closure Plan (Attachment VII.A of this application).

#### 3.1 Closure Scenario

It is expected that closure activities described in this plan will be performed by OxyChem personnel and/or contractors selected by the facility. However, closure costs reflected in this plan are based on the "worst-case" closure requirements of 40 CFR 264.142 and TCEQ recommendations contained in the Industrial Solid Waste Technical Guideline No. 10 (12/7/2017). As such, closure costs are based upon closure of the facility by a third-party at the point in time in the facility's active life when the extent and manner of its operation would make closure most expensive.

#### 3.2 Oversight by a Professional Engineer

Closure activities will be supervised by OxyChem personnel as well as an independent professional engineer (P.E.) licensed in the State of Texas. Following completion of closure, the P.E. will prepare a closure certification report in accordance with the criteria specified in Section 5.

Tank C-720B will be located within a secondary containment vault/external liner. The P.E. certifying closure will visually inspect the unit and associated concrete vault/liner and surrounding areas prior to beginning closure activities to determine candidate sampling locations for soils. Items to be noted during the visual inspection include, but are not limited to the following:

- Indication of leaks;
- Significant stained areas;
- Condition of seams and expansion joints;
- Cracks in the concrete in the vicinity of the unit; and
- Location of drain piping and/or sumps.

Based on the visual inspection, the P.E. will determine locations for collection of soil samples. If, during inspection of the concrete surfaces, areas with significant damage (e.g.,



separated concrete, extensive concrete patching, etc.) are observed, the P.E. will collect concrete samples (in addition to soil) from these locations. The P.E. will review closure activities and certify that closure was completed according to the approved closure plan.

### 3.3 Closure Procedures

OxyChem intends to "clean close" Tank C-720B in accordance with all relevant closure requirements. The approach for closure will consist of removal and/or decontamination of waste and waste residues, contaminated containment system components, contaminated soils (if any), and structures and equipment contaminated with wastes. At this time, OxyChem does not anticipate beginning closure of these units until after the year 2040. Further details regarding proposed closure procedures are described in the following sections.

The procedures for closure of Tank C-720B will include the following steps.

- Step 1 - Removal of waste and waste residues (including disposal of rinsate);
- Step 2 - Collection of verification samples;
- Step 3 - Collection of concrete (if required) and soil samples;
- Step 4 - Equipment decontamination; and
- Step 5 - Demonstration that TRRP requirements have been met (if a release has occurred).

#### Step 1 - Removal of Waste and Waste Residues

As part of the closure activities for the tank, waste or waste residues that may be present will be removed from the following components:

- Tank interior;
- Piping and ancillary equipment; and
- Concrete surfaces of the secondary containment system/secondary containment shell.

Removal of waste residues that may be present will first be accomplished by pumping remaining waste that may be present in the unit, piping, and ancillary equipment into

containers for subsequent management at an authorized facility. Waste stream piping will then be purged back to its source and disconnected from the tank.

After these initial activities, the tank will be taken out of service for further decontamination, which will consist of removal of waste residues (e.g., removal of any sludge in the tank) and decontamination of tank interior surfaces through rinsing and/or abrasive removal (e.g., scraping, blasting, pressure rinsing, etc.). Any sludge present in the tank will be removed, placed in containers, and disposed of at an authorized facility.

Decontamination will be performed using water rinsing and/or abrasive removal. Water rinsing would consist of a high-pressure wash or other appropriate method such as, but not limited to, detergent wash and/or chemical wash. Surfaces (e.g., piping interior, tank interior, and concrete slab) will be decontaminated by rinsing each surface three times (i.e., triple rinsing). Rinsewater will be potable, service, and/or deionized water. Piping and ancillary equipment will be decontaminated by rinsing with a minimum of three piping volumes of rinsewater through the piping system with rinsewater being collected in containers (e.g., tank trucks, frac tanks, drums, etc.) and properly disposed of depending on its waste classification and LDR status.

In lieu of water rinsing, surfaces (e.g., piping interior, tank interior, concrete surface) may be decontaminated using abrasive removal. Abrasive removal would consist of using a blasting media (e.g., sand, plastic bead, slag, etc.) and/or physical removal (e.g., scraping, sanding, etc.). Decontamination will be accomplished when visible residue has been removed. Waste blast material (i.e., blasting media and/or removed residue) will be collected in containers (e.g., drums, roll-offs, etc.) and properly disposed of depending on its waste classification and LDR status. Multiple blasting events may be performed to achieve visual decontamination.

## **Step 2 - Collection of Verification Samples**

After visible signs of contamination are removed as described in Step 1, OxyChem will collect verification samples to demonstrate that removal of all waste residues has occurred and decontamination has been achieved. If water rinsing is used to achieve decontamination, verification samples will be collected from the final rinsate. If abrasive removal is used to achieve decontamination, verification samples will be collected from either the final batch of blast material or from wipe samples of the decontaminated surfaces. One verification sample will be collected from each activity (i.e., one from decontamination of piping, one from decontamination of tank interior, and one from decontamination of concrete surface).

Verification samples will be analyzed for the hazardous constituents identified in Table 1, which have been selected as representative of constituents in wastes managed in the tank. Analytical results from verification samples will first be assessed to determine if any constituents are detected. If no constituents are detected in the samples, the unit will be considered decontaminated. If constituents are detected, their levels will be compared to the Tier 1 protective concentration levels (PCLs) for residential land use specified in TRRP. If levels are below Tier 1 residential PCLs, the unit will be considered decontaminated. If analytical results do not reflect that the unit has been decontaminated, Steps 1 and 2 may be repeated until specified cleanup criteria are met.

As an alternate to decontamination, OxyChem may elect, based on sample results, to remove and dispose of contaminated structures to achieve closure. Should OxyChem elect to achieve closure through removal and disposal, all relevant RCRA management procedures (e.g., waste classification, manifesting, LDR requirements, etc.) will be met.

### **Step 3 - Collection of Concrete and Soil Samples**

To verify that a release has not occurred from the unit, soil samples will be collected. Further, if the P.E. determines that concrete samples should be collected, they will be obtained per the procedures reflected below. The following procedures will be used for collection of samples from each material.

#### **Concrete Samples**

If concrete samples are collected from the concrete slab associated with the tank, the decision to collect them will be made by the supervising P.E. based on the visible inspection of concrete. As reflected in Section 3.2, the P.E. will be looking for areas that exhibit signs of significant damage.

Concrete samples would be analyzed for the presence of the hazardous constituents listed in Table 1. If no constituents are detected in the concrete sample(s), the concrete will be considered clean. If constituents are detected, measured values will be compared with waste classification and TRRP levels to determine disposition of the concrete.

In the event analysis of concrete samples indicates that the concentration of constituents do not meet the criteria for clean closure (i.e., Tier 1 residential PCLs), OxyChem may also determine if the delineated sampling areas were representative of the entire concrete pad or if additional samples will be required to obtain a defined characterization of the extent of contamination.

## **Soil Samples**

To determine if soil has been contaminated with hazardous wastes or hazardous constituents, soil samples will be collected in the vicinity of the unit. At least two soil samples will be obtained from soils under or in close proximity to (i.e., near the edge of) the concrete. The decision to collect more than two soil samples will be made by the supervising P.E. based on the visible inspection of the concrete. As reflected in Section 3.2, the P.E. will be looking for areas that exhibit signs of contamination, staining, or deterioration.

Soil samples will be analyzed for the presence of hazardous constituents listed in Table 1. If no constituents are detected in the soil sample(s), a determination will be made that no release has occurred from the unit. If constituents are detected, measured values will be assessed in accordance with TRRP to determine appropriate action. If levels are below Tier 1 residential PCLs, a determination will be made that no releases to soil have occurred.

In the event analysis of soil samples indicates that the concentration of constituents do not meet the criteria for clean closure (i.e., are above Tier 1 residential PCLs), OxyChem or the P.E. may also determine if the delineated sampling areas were representative of the entire area or if additional samples will be required to obtain a defined characterization of the extent of contamination.

## **Step 4 - Equipment Decontamination**

Non-disposable equipment used during closure that comes in contact with the waste material will be decontaminated using water and non-ionic soap followed by a potable, service, and/or deionized water rinse. Disposable equipment will be disposed of at an authorized facility. Equipment or system components that cannot be cleaned may also be disposed of at an authorized facility. Washwater will be directed to a sump or a temporary collection point (e.g., vacuum truck) and transferred to an authorized facility.

Non-disposable sampling equipment will be cleaned prior to collection of any samples and after the collection of each sample using a detergent and deionized or distilled water wash followed by a deionized or distilled water rinse.

## **Step 5 - TRRP Demonstration**

If, through analysis of soil samples, it is determined that a release from the unit has occurred to underlying soils, then a demonstration of compliance with TRRP will be performed. This

includes preparation of all applicable reports and demonstration that the remedy standard has been met. If a release has occurred, the objective will be to meet Remedy Standard A criteria to achieve clean closure. In the event that Remedy Standard A criteria cannot be met and Remedy Standard B is performed, OxyChem will obtain all required TRRP and RCRA approvals/authorizations.

## 4.0 Notification of Closure Activities

OxyChem will notify TCEQ in writing of closure activities at least 45 days prior to the date on which the facility expects final closure to commence. Such notification will be sent to both the TCEQ Central Office and the appropriate TCEQ District Office. OxyChem will also notify TCEQ in writing at least 10 days before beginning field activities or sampling to afford TCEQ personnel the opportunity to observe closure activities and/or split samples.



## 5.0 Closure Certification

Once closure of Tank C-720B is complete, the unit will be inspected by OxyChem and an independent P.E. licensed in the State of Texas. Within 60 days of completing closure of the unit, OxyChem will submit to the Executive Director of the TCEQ (by registered mail) a certification from this independent P.E. that the unit was closed in accordance with the specifications contained in the approved Closure Plan. In addition, this certification, signed by both a facility representative and an independent P.E., will include documentation supporting the P.E.'s certification.

The closure certification report will include:

- A summary of closure activities performed;
- Locations of where verification, concrete (if collected), and soil samples were taken; and
- Results of analyses for all of the verification samples, concrete samples (if collected), and soil samples.

Drawings included in the report will identify sample locations and depths with identification numbers that are cross-referenced to sample results. In addition, the report will include the results of visual inspections performed both during and after closure.

## 6.0 Permit Modification

If a change in the approved closure plan is required, OxyChem will submit a permit modification to the TCEQ requesting authorization of a change in the plan. Such a modification will occur, at a minimum, under the following circumstances:

- Changes in operating plans or facility design that affect the closure plan;
- There is a change in the expected year of closure; and/or
- During closure activities, unexpected events require modification of the approved closure plan.

In addition, if the Executive Director requests modifications to the Closure Plan, OxyChem will submit these modifications within 60 days of the Executive Director's request or within 30 days if changes occur during the closure.

## 7.0 Closure Schedule

A closure schedule for the unit is provided in Table 2. This table also indicates the estimated number of days required to complete each step of the closure task. The total number of days anticipated to close Tank C-720B following notification to the TCEQ is 112 days.

This schedule does not account for delays that may be caused by force majeure, including without limitations, fires, floods, riots, or strikes. If any of the aforementioned circumstances occur, OxyChem will submit a written request to the Executive Director of the TCEQ to extend the time allowed for closure.

## 8.0 Closure Cost Estimate

Estimated closure costs for Tank C-720B are summarized in Table 3 and supporting information for the estimates is provided in Appendix A. The estimated costs for closure of the tank were updated with a July 2020 permit modification and subsequently reviewed and approved by TCEQ. Estimates were developed in accordance with the requirements set forth in 40 CFR 264.142 and TCEQ recommendations contained in the Industrial Solid Waste Technical Guideline No. 10 (12/7/2017). As such, this estimate reflects "worst case" conditions at the time of closure. The Table 3 cost estimates are based on the 2019 values that have been updated using the inflation factors for 2020 to 2024 ( $1.012 \times 1.042 \times 1.070 \times 1.036 \times 1.024 = 1.197$ ), which results in a multiplier of 1.197.

Activities reflected in this estimate may differ somewhat from the activities that would be conducted by a closure led by OxyChem. In addition, this cost estimate is based on the fact that these facilities are constructed on a concrete slab and that the facility has had no record of a release to the environment. The following summarizes the basis of the closure cost estimates:

- Closure will commence at a point in the facility's operating life when closure is the most expensive;
- Closure is based on abandonment of the site at full capacity;
- Closure activities are performed by a third party;
- The units are at capacity at the time of closure;
- Containment will prevent entry of rainwater into the closure area during stormwater events;
- The hazardous waste units and concrete will be cleaned using high pressure/steam cleaning;
- For each sampling event, one sample will be collected from each hazardous waste unit and the rinsewater;

- It is assumed that the units will be triple rinsed and then samples collected and analyzed;
- It is assumed that two concrete and two soil samples will be collected and analyzed to determine potential contamination of concrete and soil;
- Liquid waste and washwaters will be disposed offsite; and
- Solid and sludge wastes will be shipped offsite for disposal at an authorized TSD facility.

## Tables



**Table 1 Sample Analysis Methods**

| Unit        | Parameters            | EPA Analytical Methods |
|-------------|-----------------------|------------------------|
| Tank C-720B | Volatile organics     | SW-846 8260            |
| Tank C-720B | Semivolatile organics | SW-846 8270            |

**Table 2 Closure Schedule**

| Activity                                                          | Schedule (days)     |
|-------------------------------------------------------------------|---------------------|
| Notify TCEQ of closure                                            | 45 (prior to start) |
| <b>Closure activities begin – after prior 45 day notification</b> |                     |
| Remove wastes                                                     | 3                   |
| Decontaminate unit and concrete                                   | 4                   |
| Collect rinsate, concrete (if collected), and soil samples        | 2                   |
| Analyze rinsate, concrete (if collected), and soil samples        | 21                  |
| Re-rinse, resample, and reanalyze, if necessary                   | 22                  |
| Prepare certification of closure report                           | 60                  |
| Total number of days for closure                                  | 112                 |

**Table 3 Closure Cost Estimate for Tank C-720B**

| Task                                         | Cost        |
|----------------------------------------------|-------------|
| Removal and Disposal of Waste                | \$941,800   |
| Decontamination of Tank and Rinsate Disposal | \$94,360    |
| Equipment Decontamination                    | \$1,197     |
| Verification Sampling                        | \$1,197     |
| Engineering Inspection/Supervision           | \$5,746     |
| Subtotal:                                    | \$1,044,300 |
| 10% Contingency:                             | \$104,430   |
| Total Unit Closure Cost (2024 Dollars):      | \$1,148,730 |

## **Appendix A**

### **Supporting Information for Closure Cost Estimates**

### Closure Cost Estimate for Tank C-720B

| Activity                                                                               | Cost      |
|----------------------------------------------------------------------------------------|-----------|
| <b>Waste Removal and Disposal of Contents</b>                                          |           |
| 18 hours of labor @ \$100/hr (Removal rate of 60 gpm)                                  | \$1,800   |
| 759,000 pounds (65,000 gallons) of waste @ \$1/lb disposal                             | \$759,000 |
| 13 trips @ \$2,000/trip                                                                | \$26,000  |
| Subtotal                                                                               | \$786,800 |
| <b>Decontaminate Tank with Solvent Flush Then Water Flush and Disposal of Rinsates</b> |           |
| 10 hours of labor @ \$100/hr                                                           | \$1,000   |
| 3,250 gallons of solvent @ \$5/gallon                                                  | \$16,250  |
| 27,110 pounds spent solvent @ \$1/lb                                                   | \$27,110  |
| 81,330 lbs washwater @ \$0.35/lb                                                       | \$28,470  |
| 3 trips @ \$2,000/trip                                                                 | \$6,000   |
| Subtotal                                                                               | \$78,830  |
| <b>Decontaminate Equipment</b>                                                         |           |
| 10 hours of labor @ \$100/hr                                                           | \$1,000   |
| Subtotal                                                                               | \$1,000   |
| <b>Laboratory Analysis</b>                                                             |           |
| 2 samples @ \$500/sample                                                               | \$1,000   |
| Subtotal                                                                               | \$1,000   |
| <b>Engineer's Inspection and Certification</b>                                         |           |
| 24 hours of labor @ \$200/hr                                                           | \$4,800   |
| Subtotal                                                                               | \$4,800   |
| <b>Subtotal</b>                                                                        | \$872,430 |
| 10% Contingency                                                                        | \$87,243  |
| <b>TOTAL</b>                                                                           | \$959,673 |

NOTE: All costs are in 2019 dollars

## **Attachment VII.A.4**

### **Halogen Acid Furnace Incinerator ~~CCIN-1~~**

#### **Closure Plan and Cost Estimate**

**OxyChem  
Ingleside, Texas**

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## 1.0 Introduction

OxyChem operates a chemical production facility in Ingleside, Texas. In conjunction with these activities, a variety of hazardous waste streams are generated at the facility. In support of hazardous waste management, CCIN-1 is a permitted halogen acid furnace (HAF) incinerator used to treat hazardous waste via combustion. As such, it is subject to RCRA Part B permitting requirements for closure, which are addressed in this Closure Plan.

This Closure Plan has been prepared to address the following regulatory requirements:

- Closure requirements for BIF units – 40 CFR 266.102(a)(2)(vii);
- Closure requirements - 40 CFR Part 264, Subpart G (264.111 – 264.115);
- Closure and Remediation - 30 TAC 335.8; and
- Texas Risk Reduction Program (TRRP) - 30 TAC Chapter 350.

The HAF Incinerator CCIN-1 Report, which contains design drawings of the unit, is provided as Attachment V.I.1 of this application. Other information (e.g., operational, compliance, etc.) regarding the furnace incinerator is also provided in the unit report (Attachment V.I.1). Under procedures detailed herein, OxyChem will close HAF Incinerator CCIN-1 in a manner that:

- Minimizes the need for further maintenance;
- Controls, minimizes, or eliminates post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground, surface waters or atmosphere (to the extent necessary to protect human health and the environment);
- Hazardous waste and hazardous waste residues will be removed from the unit; and
- Complies with the above regulatory requirements for closure.

A description of HAF Incinerator CCIN-1 is contained in Section 2.0, and as mentioned above, detailed descriptions regarding design and operation are provided in other attachments. Closure procedures for the unit are described in Section 3.0 with specific steps necessary to perform the closure found in Section 3.3. Sections 7.0 and 8.0 reflect the closure schedule as well as closure cost estimate.



## 2.0 Unit and Waste Descriptions

As described, OxyChem operates ~~HAF Incinerator~~ CCIN-1, which is subject to permitting standards. The unit is used to treat waste streams, which are classified as RCRA hazardous. ~~HAF Incinerator~~ CCIN-1 is a 34 million Btu/hr unit with a maximum operating temperature of 2,400 °F. The unit receives and combusts the following wastes:

- Waste oil;
- VCM heavy ends;
- VCM light ends;
- Mother liquor; and
- EDC heavy ends.

Based on expected waste characterization information for these waste streams, primary constituents are those reflected in Table 1.

### 3.0 Closure Plan

Activities specified in this section are for closure of ~~HAF Incinerator~~ CCIN-1. Activities necessary for final facility closure per the requirements of 40 CFR 264.112(b) are specified in the Facility Closure Plan (Attachment VII.A of this application).

#### 3.1 Closure Scenario

It is expected that closure activities described in this plan will be performed by OxyChem personnel and/or contractors selected by the facility. However, closure costs reflected in this plan are based on the "worst-case" closure requirements of 40 CFR 264.142 and TCEQ recommendations contained in the Industrial Solid Waste Technical Guideline No. 10 (12/7/2017). As such, closure costs are based upon closure of the facility by a third-party at the point in time in the facility's active life when the extent and manner of its operation would make closure most expensive.

#### 3.2 Oversight by a Professional Engineer

Closure activities will be supervised by OxyChem personnel as well as an independent professional engineer (P.E.) licensed in the State of Texas. Following completion of closure, the P.E. will prepare a closure certification report in accordance with the criteria specified in Section 5.

The unit is situated over a concrete foundation area. The P.E. certifying closure will visually inspect the unit and associated concrete foundation and surrounding areas prior to beginning closure activities to determine candidate sampling locations for soils. Items to be noted during the visual inspection include, but are not limited to the following:

- Indication of leaks;
- Significant stained areas;
- Condition of seams and expansion joints;
- Cracks in the concrete in the vicinity of the unit; and
- Location of drain piping and/or sumps.

Based on the visual inspection, the P.E. will determine locations for collection of soil samples. If, during inspection of the concrete surfaces, areas with significant damage (e.g., separated concrete, extensive concrete patching, etc.) are observed, the P.E. will collect

concrete samples (in addition to soil) from these locations. The P.E. will review closure activities and certify that closure was completed according to the approved closure plan.

### 3.3 Closure Procedures

OxyChem intends to "clean close" ~~HAF Incinerator~~ CCIN-1 in accordance with all relevant closure requirements. The approach for closure will consist of removal and/or decontamination of waste and waste residues, contaminated containment system components, contaminated soils (if any), and structures and equipment contaminated with wastes. At this time, OxyChem does not anticipate beginning closure of these units until after the year 2040. Further details regarding proposed closure procedures are described in the following sections.

The procedures for closure of ~~HAF Incinerator~~ CCIN-1 will include the following steps.

- Step 1 - Removal of waste and waste residues (including disposal of rinsate);
- Step 2 - Collection of verification samples;
- Step 3 - Collection of concrete (if required) and soil samples;
- Step 4 - Equipment decontamination; and
- Step 5 - Demonstration that TRRP requirements have been met (if a release has occurred).

#### Step 1 - Removal of Waste and Waste Residues

As part of the closure activities for the unit, waste or waste residues that may be present will be removed from the following components:

- ~~Furnace Incinerator~~ interior;
- Piping and ancillary equipment; and
- Concrete surfaces of the secondary containment system/secondary containment shell.

Removal of waste residues that may be present will first be accomplished by a "burnout" period whereby all remaining waste in lines is fed to the ~~furnace incinerator~~, and the unit is then fed solely with combustion gas (i.e., no hazardous waste feed) for a period of three hours.

After the initial burnout activities, the ~~furnace-incinerator~~ will be taken out of service for further decontamination, which will consist of removal of waste residues (e.g., removal of ash) and decontamination of interior surfaces through rinsing and/or abrasive removal (e.g., scraping, blasting, pressure rinsing, etc.). Ash/residue present in the ~~furnace-incinerator~~ will be removed, placed in containers, and disposed of at an authorized facility.

Decontamination will be performed using water rinsing and/or abrasive removal. Water rinsing would consist of a high-pressure wash or other appropriate method such as, but not limited to, detergent wash and/or chemical wash. Surfaces (e.g., piping interior, ~~furnace-incinerator~~ interior, and concrete slab) will be decontaminated by rinsing each surface three times (i.e., triple rinsing). Rinsewater will be potable, service, and/or deionized water. Piping and ancillary equipment will be decontaminated by rinsing with a minimum of three piping volumes of rinsewater through the piping system with rinsewater being collected in containers (e.g., tank trucks, frac tanks, drums, etc.) and properly disposed of depending on its waste classification and LDR status.

In lieu of water rinsing, surfaces (e.g., piping interior, ~~furnace-incinerator~~ interior, concrete surface) may be decontaminated using abrasive removal. Abrasive removal would consist of using a blasting media (e.g., sand, plastic bead, slag, etc.) and/or physical removal (e.g., scraping, sanding, etc.). Decontamination will be accomplished when visible residue has been removed. Waste blast material (i.e., blasting media and/or removed residue) will be collected in containers (e.g., drums, roll-offs, etc.) and properly disposed of depending on its waste classification and LDR status. Multiple ~~blasting~~ events may be performed to achieve visual decontamination.

## Step 2 - Collection of Verification Samples

After visible signs of contamination are removed as described in Step 1, OxyChem will collect verification samples to demonstrate that removal of all waste residues has occurred and decontamination has been achieved. If water rinsing is used to achieve decontamination, verification samples will be collected from the final rinsate. If abrasive removal is used to achieve decontamination, verification samples will be collected from either the final batch of blast material or from wipe samples of the decontaminated surfaces. One verification sample will be collected from each activity (i.e., one from decontamination of piping, one from decontamination of ~~furnace-incinerator~~ interior, and one from decontamination of concrete surface).

Verification samples will be analyzed for the hazardous constituents identified in Table 1, which have been selected as representative of constituents in wastes managed in the ~~furnace incinerator~~.

Analytical results from verification samples will first be assessed to determine if any constituents are detected. If no constituents are detected in the samples, the unit will be considered decontaminated. If constituents are detected, their levels will be compared to the Tier 1 protective concentration levels (PCLs) for residential land use specified in TRRP. If levels are below Tier 1 residential PCLs, the unit will be considered decontaminated. If analytical results do not reflect that the unit has been decontaminated, Steps 1 and 2 may be repeated until specified cleanup criteria are met.

As an alternate to decontamination, OxyChem may elect, based on sample results, to remove and dispose of contaminated structures to achieve closure. Should OxyChem elect to achieve closure through removal and disposal, all relevant RCRA management procedures (e.g., waste classification, manifesting, LDR requirements, etc.) will be met.

### Step 3 - Collection of Concrete and Soil Samples

To verify that a release has not occurred from the unit, soil samples will be collected. Further, if the P.E. determines that concrete samples should be collected, they will be obtained per the procedures reflected below. The following procedures will be used for collection of samples from each material.

#### Concrete Samples

If concrete samples are collected from the concrete slab associated with the ~~furnace incinerator~~, the decision to collect them will be made by the supervising P.E. based on the visible inspection of concrete. As reflected in Section 3.2, the P.E. will be looking for areas that exhibit signs of significant damage.

Concrete samples would be analyzed for the presence of the hazardous constituents listed in Table 1. If no constituents are detected in the concrete sample(s), the concrete will be considered clean. If constituents are detected, measured values will be compared with waste classification and TRRP levels to determine disposition of the concrete.

In the event analysis of concrete samples indicates that the concentration of constituents do not meet the criteria for clean closure (i.e., Tier 1 residential PCLs), OxyChem may also

determine if the delineated sampling areas were representative of the entire concrete pad or if additional samples will be required to obtain a defined characterization of the extent of contamination.

### **Soil Samples**

To determine if soil has been contaminated with hazardous wastes or hazardous constituents, soil samples will be collected in the vicinity of the unit. At least two soil samples will be obtained from soils under or in close proximity to (i.e., near the edge of) the concrete. The decision to collect more than two soil samples will be made by the supervising P.E. based on the visible inspection of the concrete. As reflected in Section 3.2, the P.E. will be looking for areas that exhibit signs of contamination, staining, or deterioration.

Soil samples will be analyzed for the presence of hazardous constituents listed in Table 1. If no constituents are detected in the soil sample(s), a determination will be made that no release has occurred from the unit. If constituents are detected, measured values will be assessed in accordance with TRRP to determine appropriate action. If levels are below Tier 1 residential PCLs, a determination will be made that no releases to soil have occurred.

In the event analysis of soil samples indicates that the concentration of constituents do not meet the criteria for clean closure (i.e., are above Tier 1 residential PCLs), OxyChem or the P.E. may also determine if the delineated sampling areas were representative of the entire area or if additional samples will be required to obtain a defined characterization of the extent of contamination.

### **Step 4 - Equipment Decontamination**

Non-disposable equipment used during closure that comes in contact with the waste material will be decontaminated using water and non-ionic soap followed by a potable, service, and/or deionized water rinse. Disposable equipment will be disposed of at an authorized facility.

Equipment or system component that cannot be cleaned may also be disposed of at an authorized facility. Washwater will be directed to a sump or a temporary collection point (e.g., vacuum truck) and transferred to an authorized facility.

Non-disposable sampling equipment will be cleaned prior to collection of any samples and after the collection of each sample using a detergent and deionized or distilled water wash followed by a deionized or distilled water rinse.



## Step 5 - TRRP Demonstration

If, through analysis of soil samples, it is determined that a release from the unit has occurred to underlying soils, then a demonstration of compliance with TRRP will be performed. This includes preparation of all applicable reports and demonstration that the remedy standard has been met. If a release has occurred, the objective will be to meet Remedy Standard A criteria to achieve clean closure. In the event that Remedy Standard A criteria cannot be met and Remedy Standard B is performed, OxyChem will obtain all required TRRP and RCRA approvals/authorizations.

## 4.0 Notification of Closure Activities

OxyChem will notify TCEQ in writing of closure activities at least 45 days prior to the date on which the facility expects partial or final closure to commence. Such notification will be sent to both the TCEQ Central Office and the appropriate TCEQ District Office. OxyChem will also notify TCEQ in writing at least 10 days before beginning field activities or sampling to afford TCEQ personnel the opportunity to observe closure activities and/or split samples.

## 5.0 Closure Certification

Once closure of ~~HAF Incinerator~~ CCIN-1 is complete, the unit will be inspected by OxyChem and an independent P.E. licensed in the State of Texas. Within 60 days of completing closure of the unit, OxyChem will submit to the Executive Director of the TCEQ (by registered mail) a certification from this independent P.E. that the unit was closed in accordance with the specifications contained in the approved Closure Plan. In addition, this certification, signed by both a facility representative and an independent P.E., will include documentation supporting the P.E.'s certification.

The closure certification report will include:

- A summary of closure activities performed;
- Locations of where verification, concrete (if collected), and soil samples were taken; and
- Results of analyses for all of the verification samples, concrete samples (if collected), and soil samples.

Drawings included in the report will identify sample locations and depths with identification numbers that are cross-referenced to sample results. In addition, the report will include the results of visual inspections performed both during and after closure.

## 6.0 Permit Modification

If a change in the approved closure plan is required, OxyChem will submit a permit modification to the TCEQ requesting authorization of a change in the plan. Such a modification will occur, at a minimum, under the following circumstances:

- Changes in operating plans or facility design that affect the closure plan;
- There is a change in the expected year of closure; and/or
- During closure activities, unexpected events require modification of the approved closure plan.

In addition, if the Executive Director requests modifications to the Closure Plan, OxyChem will submit these modifications within 60 days of the Executive Director's request or within 30 days if changes occur during the closure.

## 7.0 Closure Schedule

A closure schedule for the unit is provided in Table 2. This table also indicates the estimated number of days required to complete each step of the closure task. The total number of days anticipated to close ~~HAF Incinerator~~ CCIN-1 following notification to the TCEQ is 82 days.

This schedule does not account for delays that may be caused by force majeure, including without limitations, fires, floods, riots, or strikes. If any of the aforementioned circumstances occur, OxyChem will submit a written request to the Executive Director of the TCEQ to extend the time allowed for closure.

## 8.0 Closure Cost Estimate

Estimated closure costs for ~~HAF-Incinerator~~ CCIN-1 are summarized in Table 3 and supporting information for the estimates is provided in Appendix A. The estimated costs for closure of the ~~furnace-incinerator~~ were updated with a July 2020 permit modification and subsequently reviewed and approved by TCEQ. Estimates were developed in accordance with the requirements set forth in 40 CFR 264.142 and TCEQ recommendations contained in the Industrial Solid Waste Technical Guideline No. 10 (12/7/2017). As such, this estimate reflects "worst case" conditions at the time of closure. The Table 3 cost estimates are based on the 2019 values that have been updated using the inflation factors for 2020 to 2024 ( $1.012 \times 1.042 \times 1.070 \times 1.036 \times 1.024 = 1.197$ ), which results in a multiplier of 1.197.

Activities reflected in this estimate may differ somewhat from the activities that would be conducted by a closure led by OxyChem. In addition, this cost estimate is based on the fact that these facilities are constructed on a concrete slab and that the facility has had no record of a release to the environment. The following summarizes the basis of the closure cost estimates:

- Closure will commence at a point in the facility's operating life when closure is the most expensive;
- Closure is based on abandonment of the site at full capacity;
- Closure activities are performed by a third party;
- The units are at capacity at the time of closure;
- Containment will prevent entry of rainwater into the closure area during stormwater events;
- The hazardous waste units and concrete will be cleaned using high pressure/steam cleaning;
- For each sampling event, one sample will be collected from each hazardous waste unit and the rinsewater;



- It is assumed that the units will be triple rinsed and then samples collected and analyzed;
- It is assumed that two concrete and two soil samples will be collected and analyzed to determine potential contamination of concrete and soil;
- Liquid waste and washwaters will be disposed offsite; and
- Solid and sludge wastes will be shipped offsite for disposal at an authorized TSD facility.

## Tables

**Table 1 Sample Analysis Methods**

| Unit                              | Parameters        | EPA Analytical Methods |
|-----------------------------------|-------------------|------------------------|
| <del>HAF Incinerator</del> CCIN-1 | Volatile organics | SW-846, 8260           |

**Table 2 Closure Schedule**

| Activity                                                          | Schedule (days)     |
|-------------------------------------------------------------------|---------------------|
| Notify TCEQ of closure                                            | 45 (prior to start) |
| <b>Closure activities begin – after prior 45 day notification</b> |                     |
| Remove wastes                                                     | 3                   |
| Decontaminate unit and concrete                                   | 4                   |
| Collect rinsate, concrete (if collected), and soil samples        | 2                   |
| Analyze rinsate, concrete (if collected), and soil samples        | 21                  |
| Re-rinse, resample, and reanalyze, if necessary                   | 22                  |
| Prepare certification of closure report                           | 30                  |
| Total number of days for closure                                  | 82                  |

**Table 3 Closure Cost Estimate for ~~HAF Incinerator~~ CCIN-1**

| Task                                             | Cost      |
|--------------------------------------------------|-----------|
| <del>Rinsing/Flush</del> and disposal of rinsate | \$85,466  |
| <del>Combust/Incinerate</del> natural gas        | \$479     |
| Removal of ash, etc.                             | \$74,166  |
| Decontamination of cleanup equipment             | \$1,197   |
| Sampling and associated laboratory charges       | \$1,197   |
| Engineering Inspection/Supervision               | \$5,746   |
| Subtotal                                         | \$168,251 |
| 10% Contingency                                  | \$16,825  |
| Total Unit Closure Cost (2024 Dollars)           | \$185,076 |

## Appendix A

### Supporting Information for Closure Cost Estimate

**Closure Cost Estimate for ~~HAF Incinerator~~ CCIN-1**

| Activity                                                                                                       | Cost      |
|----------------------------------------------------------------------------------------------------------------|-----------|
| <b>Flush <del>Furnace Incinerator</del>, Piping, and Pumps with Appropriate Solvent and Dispose of Rinsate</b> |           |
| 8 hours of labor @ \$50/hr                                                                                     | \$400     |
| 1,000 gallons solvent @ \$5/gallon                                                                             | \$5,000   |
| 35,000 pounds (3,000 gallons) of waste @ \$1/lb disposal                                                       | \$35,000  |
| 1,000 gallons spent solvent @ \$5/gallon                                                                       | \$5,000   |
| 1 trip @ \$2,000/trip                                                                                          | \$26,000  |
| Subtotal                                                                                                       | \$71,400  |
| <b>Burn Natural Gas</b>                                                                                        |           |
| 4 hours of labor and natural gas @ \$100/hr                                                                    | \$400     |
| Subtotal                                                                                                       | \$400     |
| <b>Remove and Dispose of Ash, Scrubber Water, Absorber Effluents, and Spent Catalyst</b>                       |           |
| 16 hours of labor @ \$50/hr                                                                                    | \$800     |
| 4 drums of ash @ \$500/drum                                                                                    | \$2,000   |
| 21,500 gallons of liquids @ \$2/gallon                                                                         | \$43,000  |
| 5.4 tons of catalyst @ \$400/ton                                                                               | \$2,160   |
| 7 trips @ \$2,000/trip                                                                                         | \$14,000  |
| Subtotal                                                                                                       | \$61,960  |
| <b>Decontaminate Equipment</b>                                                                                 |           |
| 10 hours of labor @ \$100/hr                                                                                   | \$1,000   |
| Subtotal                                                                                                       | \$1,000   |
| <b>Laboratory Analysis</b>                                                                                     |           |
| 2 samples @ \$500/sample                                                                                       | \$1,000   |
| Subtotal                                                                                                       | \$1,000   |
| <b>Engineer's Inspection and Certification</b>                                                                 |           |
| 24 hours of labor @ \$200/hr                                                                                   | \$4,800   |
| Subtotal                                                                                                       | \$4,800   |
| <b>Subtotal</b>                                                                                                | \$140,560 |
| 10% Contingency                                                                                                | \$14,056  |
| <b>TOTAL</b>                                                                                                   | \$154,616 |

- Notes: 1. All costs are in 2019 dollars
2. In order to determine the amount of rinsates generated, OxyChem first considered that the flow rate to the unit is ~8 gpm with 250 minutes of flush time for solvent and 500 minutes of flush time for water.

## **Attachment VII.A.5**

### **Halogen Acid Furnace Incinerator CCIN-2**

#### **Closure Plan and Cost Estimate**

**OxyChem  
Ingleside, Texas**



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## Appendices

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## 1.0 Introduction

OxyChem operates a chemical production facility in Ingleside, Texas. In conjunction with these activities, a variety of hazardous waste streams are generated at the facility. In support of hazardous waste management, CCIN-2 is a permitted ~~halogen acid furnace-incinerator~~ used to treat hazardous waste via combustion. As such, it is subject to RCRA Part B permitting requirements for closure, which are addressed in this Closure Plan.

This Closure Plan has been prepared to address the following regulatory requirements:

- Closure requirements for BIF units – 40 CFR 266.102(a)(2)(vii);
- Closure requirements - 40 CFR Part 264, Subpart G (264.111 – 264.115);
- Closure and Remediation - 30 TAC 335.8; and
- Texas Risk Reduction Program (TRRP) - 30 TAC Chapter 350.

The ~~HAF-Incinerator~~ CCIN-2 Report, which contains design drawings of the unit, is provided as Attachment V.I.2 of this application. Other information (e.g., operational, compliance, etc.) regarding the ~~furnace-incinerator~~ is also provided in the unit report (Attachment V.I.2). Under procedures detailed herein, OxyChem will close ~~HAF-Incinerator~~ CCIN-2 in a manner that:

- Minimizes the need for further maintenance;
- Controls, minimizes, or eliminates post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground, surface waters or atmosphere (to the extent necessary to protect human health and the environment);
- Hazardous waste and hazardous waste residues will be removed from the unit; and
- Complies with the above regulatory requirements for closure.

A description of ~~HAF-Incinerator~~ CCIN-2 is contained in Section 2.0, and as mentioned above, detailed descriptions regarding design and operation are provided in other attachments. Closure procedures for the unit are described in Section 3.0 with specific steps necessary to perform the closure found in Section 3.3. Sections 7.0 and 8.0 reflect the closure schedule as well as closure cost estimate.

## 2.0 Unit and Waste Descriptions

As described, OxyChem operates ~~HAF Incinerator~~ CCIN-2, which is subject to permitting standards. The unit is used to treat waste streams, which are classified as RCRA hazardous. ~~HAF Incinerator~~ CCIN-2 is a 34 million Btu/hr unit with a maximum operating temperature of 2,400 °F. The unit receives and combusts the following wastes:

- Waste oil;
- VCM heavy ends;
- VCM light ends;
- Mother liquor; and
- EDC heavy ends.

Based on expected waste characterization information for these waste streams, primary constituents are those reflected in Table 1.

### 3.0 Closure Plan

Activities specified in this section are for closure of ~~HAF Incinerator~~ CCIN-2. Activities necessary for final facility closure per the requirements of 40 CFR 264.112(b) are specified in the Facility Closure Plan (Attachment VII.A of this application).

#### 3.1 Closure Scenario

It is expected that closure activities described in this plan will be performed by OxyChem personnel and/or contractors selected by the facility. However, closure costs reflected in this plan are based on the "worst-case" closure requirements of 40 CFR 264.142 and TCEQ recommendations contained in the Industrial Solid Waste Technical Guideline No. 10 (12/7/2017). As such, closure costs are based upon closure of the facility by a third-party at the point in time in the facility's active life when the extent and manner of its operation would make closure most expensive.

#### 3.2 Oversight by a Professional Engineer

Closure activities will be supervised by OxyChem personnel as well as an independent professional engineer (P.E.) licensed in the State of Texas. Following completion of closure, the P.E. will prepare a closure certification report in accordance with the criteria specified in Section 5.

The unit is situated over a concrete foundation area. The P.E. certifying closure will visually inspect the unit and associated concrete foundation and surrounding areas prior to beginning closure activities to determine candidate sampling locations for soils. Items to be noted during the visual inspection include, but are not limited to the following:

- Indication of leaks;
- Significant stained areas;
- Condition of seams and expansion joints;
- Cracks in the concrete in the vicinity of the unit; and
- Location of drain piping and/or sumps.

Based on the visual inspection, the P.E. will determine locations for collection of soil samples. If, during inspection of the concrete surfaces, areas with significant damage (e.g., separated concrete, extensive concrete patching, etc.) are observed, the P.E. will collect

concrete samples (in addition to soil) from these locations. The P.E. will review closure activities and certify that closure was completed according to the approved closure plan.

### 3.3 Closure Procedures

OxyChem intends to "clean close" ~~HAF-Incinerator~~ CCIN-2 in accordance with all relevant closure requirements. The approach for closure will consist of removal and/or decontamination of waste and waste residues, contaminated containment system components, contaminated soils (if any), and structures and equipment contaminated with wastes. At this time, OxyChem does not anticipate beginning closure of these units until after the year 2040. Further details regarding proposed closure procedures are described in the following sections.

The procedures for closure of ~~HAF-Incinerator~~ CCIN-2 will include the following steps.

- Step 1 - Removal of waste and waste residues (including disposal of rinsate);
- Step 2 - Collection of verification samples;
- Step 3 - Collection of concrete (if required) and soil samples;
- Step 4 - Equipment decontamination; and
- Step 5 - Demonstration that TRRP requirements have been met (if a release has occurred).

#### Step 1 - Removal of Waste and Waste Residues

As part of the closure activities for the unit, waste or waste residues that may be present will be removed from the following components:

- ~~FurnaceIncinerator~~ interior;
- Piping and ancillary equipment; and
- Concrete surfaces of the secondary containment system/secondary containment shell.

Removal of waste residues that may be present will first be accomplished by a "burnout" period whereby all remaining waste in lines is fed to the ~~furnace-incinerator~~, and the unit is then fed solely with combustion gas (i.e., no hazardous waste feed) for a period of three hours.

After the initial burnout activities, the ~~furnace-incinerator~~ will be taken out of service for further decontamination, which will consist of removal of waste residues (e.g., removal of ash) and decontamination of interior surfaces through rinsing and/or abrasive removal (e.g., scraping, blasting, pressure rinsing, etc.). Ash/residue present in the ~~furnace-incinerator~~ will be removed, placed in containers, and disposed of at an authorized facility.

Decontamination will be performed using water rinsing and/or abrasive removal. Water rinsing would consist of a high-pressure wash or other appropriate method such as, but not limited to, detergent wash and/or chemical wash. Surfaces (e.g., piping interior, ~~furnace-incinerator~~ interior, and concrete slab) will be decontaminated by rinsing each surface three times (i.e., triple rinsing). Rinsewater will be potable, service, and/or deionized water. Piping and ancillary equipment will be decontaminated by rinsing with a minimum of three piping volumes of rinsewater through the piping system with rinsewater being collected in containers (e.g., tank trucks, frac tanks, drums, etc.) and properly disposed of depending on its waste classification and LDR status.

In lieu of water rinsing, surfaces (e.g., piping interior, ~~furnace-incinerator~~ interior, concrete surface) may be decontaminated using abrasive removal. Abrasive removal would consist of using a blasting media (e.g., sand, plastic bead, slag, etc.) and/or physical removal (e.g., scraping, sanding, etc.). Decontamination will be accomplished when visible residue has been removed. Waste blast material (i.e., blasting media and/or removed residue) will be collected in containers (e.g., drums, roll-offs, etc.) and properly disposed of depending on its waste classification and LDR status. Multiple ~~blasting~~-events may be performed to achieve visual decontamination.

## Step 2 - Collection of Verification Samples

After visible signs of contamination are removed as described in Step 1, OxyChem will collect verification samples to demonstrate that removal of all waste residues has occurred and decontamination has been achieved. If water rinsing is used to achieve decontamination, verification samples will be collected from the final rinsate. If abrasive removal is used to achieve decontamination, verification samples will be collected from either the final batch of blast material or from wipe samples of the decontaminated surfaces. One verification sample will be collected from each activity (i.e., one from decontamination of piping, one from decontamination of ~~furnace-incinerator~~ interior, and one from decontamination of concrete surface).



Verification samples will be analyzed for the hazardous constituents identified in Table 1, which have been selected as representative of constituents in wastes managed in the ~~furnace incinerator~~.

Analytical results from verification samples will first be assessed to determine if any constituents are detected. If no constituents are detected in the samples, the unit will be considered decontaminated. If constituents are detected, their levels will be compared to the Tier 1 protective concentration levels (PCLs) for residential land use specified in TRRP. If levels are below Tier 1 residential PCLs, the unit will be considered decontaminated. If analytical results do not reflect that the unit has been decontaminated, Steps 1 and 2 may be repeated until specified cleanup criteria are met.

As an alternate to decontamination, OxyChem may elect, based on sample results, to remove and dispose of contaminated structures to achieve closure. Should OxyChem elect to achieve closure through removal and disposal, all relevant RCRA management procedures (e.g., waste classification, manifesting, LDR requirements, etc.) will be met.

### Step 3 - Collection of Concrete and Soil Samples

To verify that a release has not occurred from the unit, soil samples will be collected. Further, if the P.E. determines that concrete samples should be collected, they will be obtained per the procedures reflected below. The following procedures will be used for collection of samples from each material.

#### Concrete Samples

If concrete samples are collected from the concrete slab associated with the ~~furnace incinerator~~, the decision to collect them will be made by the supervising P.E. based on the visible inspection of concrete. As reflected in Section 3.2, the P.E. will be looking for areas that exhibit signs of significant damage.

Concrete samples would be analyzed for the presence of the hazardous constituents listed in Table 1. If no constituents are detected in the concrete sample(s), the concrete will be considered clean. If constituents are detected, measured values will be compared with waste classification and TRRP levels to determine disposition of the concrete.

In the event analysis of concrete samples indicates that the concentration of constituents do not meet the criteria for clean closure (i.e., Tier 1 residential PCLs), OxyChem may also

determine if the delineated sampling areas were representative of the entire concrete pad or if additional samples will be required to obtain a defined characterization of the extent of contamination.

### **Soil Samples**

To determine if soil has been contaminated with hazardous wastes or hazardous constituents, soil samples will be collected in the vicinity of the unit. At least two soil samples will be obtained from soils under or in close proximity to (i.e., near the edge of) the concrete. The decision to collect more than two soil samples will be made by the supervising P.E. based on the visible inspection of the concrete. As reflected in Section 3.2, the P.E. will be looking for areas that exhibit signs of contamination, staining, or deterioration.

Soil samples will be analyzed for the presence of hazardous constituents listed in Table 1. If no constituents are detected in the soil sample(s), a determination will be made that no release has occurred from the unit. If constituents are detected, measured values will be assessed in accordance with TRRP to determine appropriate action. If levels are below Tier 1 residential PCLs, a determination will be made that no releases to soil have occurred.

In the event analysis of soil samples indicates that the concentration of constituents do not meet the criteria for clean closure (i.e., are above Tier 1 residential PCLs), OxyChem or the P.E. may also determine if the delineated sampling areas were representative of the entire area or if additional samples will be required to obtain a defined characterization of the extent of contamination.

### **Step 4 - Equipment Decontamination**

Non-disposable equipment used during closure that comes in contact with the waste material will be decontaminated using water and non-ionic soap followed by a potable, service, and/or deionized water rinse. Disposable equipment will be disposed of at an authorized facility.

Equipment or system component that cannot be cleaned may also be disposed of at an authorized facility. Washwater will be directed to a sump or a temporary collection point (e.g., vacuum truck) and transferred to an authorized facility.

Non-disposable sampling equipment will be cleaned prior to collection of any samples and after the collection of each sample using a detergent and deionized or distilled water wash followed by a deionized or distilled water rinse.

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If, through analysis of soil samples, it is determined that a release from the unit has occurred to underlying soils, then a demonstration of compliance with TRRP will be performed. This includes preparation of all applicable reports and demonstration that the remedy standard has been met. If a release has occurred, the objective will be to meet Remedy Standard A criteria to achieve clean closure. In the event that Remedy Standard A criteria cannot be met and Remedy Standard B is performed, OxyChem will obtain all required TRRP and RCRA approvals/authorizations.

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OxyChem will notify TCEQ in writing of closure activities at least 45 days prior to the date on which the facility expects partial or final closure to commence. Such notification will be sent to both the TCEQ Central Office and the appropriate TCEQ District Office. OxyChem will also notify TCEQ in writing at least 10 days before beginning field activities or sampling to afford TCEQ personnel the opportunity to observe closure activities and/or split samples.

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Once closure of ~~HAF Incinerator~~ CCIN-2 is complete, the unit will be inspected by OxyChem and an independent P.E. licensed in the State of Texas. Within 60 days of completing closure of the unit, OxyChem will submit to the Executive Director of the TCEQ (by registered mail) a certification from this independent P.E. that the unit was closed in accordance with the specifications contained in the approved Closure Plan. In addition, this certification, signed by both a facility representative and an independent P.E., will include documentation supporting the P.E.'s certification.

The closure certification report will include:

- A summary of closure activities performed;
- Locations of where verification, concrete (if collected), and soil samples were taken; and
- Results of analyses for all of the verification samples, concrete samples (if collected), and soil samples.

Drawings included in the report will identify sample locations and depths with identification numbers that are cross-referenced to sample results. In addition, the report will include the results of visual inspections performed both during and after closure.

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- During closure activities, unexpected events require modification of the approved closure plan.

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Estimated closure costs for ~~HAF-Incinerator~~ CCIN-2 are summarized in Table 3 and supporting information for the estimates is provided in Appendix A. The estimated costs for closure of the ~~furnace-incinerator~~ were updated with a July 2020 permit modification and subsequently reviewed and approved by TCEQ. Estimates were developed in accordance with the requirements set forth in 40 CFR 264.142 and TCEQ recommendations contained in the Industrial Solid Waste Technical Guideline No. 10 (12/7/2017). As such, this estimate reflects "worst case" conditions at the time of closure. The Table 3 cost estimates are based on the 2019 values that have been updated using the inflation factors for 2020 to 2024 ( $1.012 \times 1.042 \times 1.070 \times 1.036 \times 1.024 = 1.197$ ), which results in a multiplier of 1.197.

Activities reflected in this estimate may differ somewhat from the activities that would be conducted by a closure led by OxyChem. In addition, this cost estimate is based on the fact that these facilities are constructed on a concrete slab and that the facility has had no record of a release to the environment. The following summarizes the basis of the closure cost estimates:

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- Closure is based on abandonment of the site at full capacity;
- Closure activities are performed by a third party;
- The units are at capacity at the time of closure;
- Containment will prevent entry of rainwater into the closure area during stormwater events;
- The hazardous waste units and concrete will be cleaned using high pressure/steam cleaning;
- For each sampling event, one sample will be collected from each hazardous waste unit and the rinsewater;

- It is assumed that the units will be triple rinsed and then samples collected and analyzed;
- It is assumed that two concrete and two soil samples will be collected and analyzed to determine potential contamination of concrete and soil;
- Liquid waste and washwaters will be disposed offsite; and
- Solid and sludge wastes will be shipped offsite for disposal at an authorized TSD facility.

## Tables

**Table 1 Sample Analysis Methods**

| Unit                              | Parameters        | EPA Analytical Methods |
|-----------------------------------|-------------------|------------------------|
| <del>HAF Incinerator</del> CCIN-2 | Volatile organics | SW-846, 8260           |

**Table 2 Closure Schedule**

| Activity                                                          | Schedule (days)     |
|-------------------------------------------------------------------|---------------------|
| Notify TCEQ of closure                                            | 45 (prior to start) |
| <b>Closure activities begin – after prior 45 day notification</b> |                     |
| Remove wastes                                                     | 3                   |
| Decontaminate unit and concrete                                   | 4                   |
| Collect rinsate, concrete (if collected), and soil samples        | 2                   |
| Analyze rinsate, concrete (if collected), and soil samples        | 21                  |
| Re-rinse, resample, and reanalyze, if necessary                   | 22                  |
| Prepare certification of closure report                           | 30                  |
| Total number of days for closure                                  | 82                  |

**Table 3 Closure Cost Estimate for ~~HAF Incinerator~~ CCIN-2**

| Task                                             | Cost      |
|--------------------------------------------------|-----------|
| <del>Rinsing Flush</del> and disposal of rinsate | \$85,466  |
| <del>Combust Incinerate</del> natural gas        | \$479     |
| Removal of ash, etc.                             | \$74,166  |
| Decontamination of cleanup equipment             | \$1,197   |
| Sampling and associated laboratory charges       | \$1,197   |
| Engineering Inspection/Supervision               | \$5,746   |
| Subtotal                                         | \$168,251 |
| 10% Contingency                                  | \$16,825  |
| Total Unit Closure Cost (2024 Dollars)           | \$185,076 |

## Appendix A

### Supporting Information for Closure Cost Estimate



**Closure Cost Estimate for ~~HAF Incinerator~~ CCIN-2**

| Activity                                                                                                       | Cost      |
|----------------------------------------------------------------------------------------------------------------|-----------|
| <b>Flush <del>Furnace Incinerator</del>, Piping, and Pumps with Appropriate Solvent and Dispose of Rinsate</b> |           |
| 8 hours of labor @ \$50/hr                                                                                     | \$400     |
| 1,000 gallons solvent @ \$5/gallon                                                                             | \$5,000   |
| 35,000 pounds (3,000 gallons) of waste @ \$1/lb disposal                                                       | \$35,000  |
| 1,000 gallons spent solvent @ \$5/gallon                                                                       | \$5,000   |
| 1 trip @ \$2,000/trip                                                                                          | \$26,000  |
| Subtotal                                                                                                       | \$71,400  |
| <b>Burn Natural Gas</b>                                                                                        |           |
| 4 hours of labor and natural gas @ \$100/hr                                                                    | \$400     |
| Subtotal                                                                                                       | \$400     |
| <b>Remove and Dispose of Ash, Scrubber Water, Absorber Effluents, and Spent Catalyst</b>                       |           |
| 16 hours of labor @ \$50/hr                                                                                    | \$800     |
| 4 drums of ash @ \$500/drum                                                                                    | \$2,000   |
| 21,500 gallons of liquids @ \$2/gallon                                                                         | \$43,000  |
| 5.4 tons of catalyst @ \$400/ton                                                                               | \$2,160   |
| 7 trips @ \$2,000/trip                                                                                         | \$14,000  |
| Subtotal                                                                                                       | \$61,960  |
| <b>Decontaminate Equipment</b>                                                                                 |           |
| 10 hours of labor @ \$100/hr                                                                                   | \$1,000   |
| Subtotal                                                                                                       | \$1,000   |
| <b>Laboratory Analysis</b>                                                                                     |           |
| 2 samples @ \$500/sample                                                                                       | \$1,000   |
| Subtotal                                                                                                       | \$1,000   |
| <b>Engineer's Inspection and Certification</b>                                                                 |           |
| 24 hours of labor @ \$200/hr                                                                                   | \$4,800   |
| Subtotal                                                                                                       | \$4,800   |
| <b>Subtotal</b>                                                                                                | \$140,560 |
| 10% Contingency                                                                                                | \$14,056  |
| <b>TOTAL</b>                                                                                                   | \$154,616 |

- Notes: 1. All costs are in 2019 dollars
2. In order to determine the amount of rinsates generated, OxyChem first considered that the flow rate to the unit is ~8 gpm with 250 minutes of flush time for solvent and 500 minutes of flush time for water.

## **Attachment VIII.**

### **Financial Assurance**



**Occidental Chemical Corporation**  
A subsidiary of Occidental Petroleum Corporation

P.O. Drawer CC, Ingleside, Texas 78362-0710  
4133 Hwy. 361, Gregory, Texas 78359-6240

October 15, 2025

Mr. Robert Patton, Jr.  
Manager, Industrial and Hazardous Waste Permits Section  
Texas Commission on Environmental Quality  
Building F, MC 130 12100 Park 35 Circle  
Austin, Texas 78753

Re: Financial Disclosure Letter for Occidental Chemical Corporation Permit Renewal  
Hazardous Waste Permit No. 50322  
Industrial Solid Waste Registration No. 38280  
EPA ID No. TXD 982 286 932  
RN100211176; CN600125256

Dear Mr. Patton:

This letter is furnished to you in response to financial disclosure requirements as applicable under Texas Health and Safety Code Section 361.085 and Title 30, Texas Administrative Code (30 TAC), Section 305.50 to provide assurance that Occidental Chemical Corporation has sufficient financial resources.

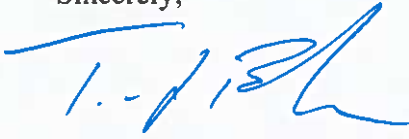
In keeping with the above law and rule requirements I hereby certify that Occidental Chemical Corporation is adequately capitalized and has sufficient financial resources to operate, close, provide post-closure care for and perform corrective action for the above-referenced facility in a safe manner, and in compliance with the permit and all applicable rules.

Occidental Chemical Corporation currently provides a financial assurance mechanism as set out in 30 TAC, Chapter 37, Subchapter C to meet Occidental Chemical Corporation's financial assurance obligations the following:

OxyChem-Ingleside, TX currently provides a letter of credit financial assurance mechanism as set out in 30 TAC, Chapter 37, Subchapter C to meet Occidental Chemical Corporation's financial assurance obligations.

I am authorized to make these statements on behalf of Occidental Chemical Corporation. I understand that the TCEQ may request additional information as part of their review.

Sincerely,

A handwritten signature in blue ink, appearing to read "T. Behne", with a stylized flourish at the end.

Todd J. Behne  
Plant Manager

## **Attachment IX.**

### **Releases from Solid Waste Units and Corrective Action**

## **Attachment IX**

### **Solid Waste Management Units**

**OxyChem**  
**Ingleside, Texas**



## Table of Contents

|     |                                 |   |
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| 1.0 | Background .....                | 1 |
| 2.0 | Facility Units .....            | 2 |
| 3.0 | Ongoing Corrective Action ..... | 3 |

## ~~Appendices~~**Attachments**

~~Appendix Attachment A~~ ——— Notice of Registration – ~~August 14~~April 9, 2025

~~Appendix B~~ January 22, 2003 TCEQ Letter

~~Appendix C~~ Preliminary Review Facility Checklist

~~Appendix D~~ Preliminary Review Unit Checklist

## 1.0 Background

The original application for Permit No. HW-50322 was submitted around 1990 to authorize the operation of halogen acid furnaces ~~incinerators~~ CCIN-1 and CCIN-2. As part of that application, OxyChem included information on solid waste management units (SWMUs) at the facility. When Permit No. HW-50322 was issued on September 23, 1991, it contained RCRA Facility Investigation (RFI) provisions for select units.

OxyChem has since completed investigation and evaluation of all SWMUs identified in the original permit. Via TCEQ letter dated January 22, 2003 (see Appendix B), RFI obligations had been met at the facility. Pursuant to Provision IX.C of each of the RCRA permits issued since June 16, 2005, there are no RFI units currently identified for the facility.

## 2.0 Facility Units

Attachment A contains a copy of the current notice of registration (NOR) for the facility. As indicated on the NOR, there are 133 units at the facility. The following units are reflected as being closed:

- Tank (NOR Unit No. 005);
- Container Storage Area (NOR Unit No. 006);
- Misc. Storage Containers (NOR Unit No. 048);
- Tank (NOR Unit No. 081); and
- Tank (NOR Unit No. 075).

The following units are reflected as being inactive:

- Tank (NOR Unit No. 001);
- Container Storage Area (NOR Unit No. 002);
- Waste Pile (NOR Unit No. 004);
- Tank (NOR Unit No. 014);
- Sump (NOR Unit No. 015);
- Sump (NOR Unit No. 016);
- Tank (NOR Unit No. 018);
- Misc. Storage Containers (NOR Unit No. 019);
- Tank (NOR Unit No. 020);
- Misc. Storage Containers (NOR Unit No. 021);
- EDC Wastewater Tanks (NOR Units 024 through 031 and 034);
- Tank (NOR Unit No. 051);
- Tank (NOR Unit No. 052);
- Misc. Storage Containers (NOR Unit No. 077);
- Misc. Storage Containers (NOR Unit No. 079);
- Container Storage Area (NOR Unit No. 088);
- Container Storage Area (NOR Unit No. 096); and
- Misc. Storage Containers (NOR Unit No. 097).

The remaining 102 units at the facility are indicated as being active on the NOR.

### **3.0 Ongoing Corrective Action**

OxyChem has completed all RFI activities for the facility, and there are no ongoing corrective action activities at the site.

## Appendix A

### Notice of Registration

**August 14~~April 9~~, 2025**

38280

OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

Solid Waste Registration Number: 38280 EPA Id: TXD982286932

Company Name: Occidental Chemical Corporation  
Site Name: OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT  
Site Location: TWO MILES WEST OF HWY 1069 ON HWY 361  
Primary Contact: BAGGETT, ARON  
Mailing Address: PO BOX CC  
Region: 14  
County: 205 SAN PATRICIO  
Land Type: Private  
Title: ENVIRONMENTAL  
Site Street Address: 4133 HWY 361  
Initial Registration Date: 12/11/1987  
Last Amendment Date: 08/13/2025  
Last Date NOR Computer update: 08/13/2025  
Phone: 361-776-6395

INGLESIDE, TX 78362-0710

GREGORY, TX 78359

Registration Status: Active  
Registration Type: Generator Receiver  
Generator Type: Industrial  
Receiver Type: Captive  
Transporter Type:   
Transport Wst Class:   
Reporting Method: STEERS  
Hazardous Waste Generation Status: Large Quantity Generator

Universal Waste Activity:  
Large Quantity Handler of Universal Waste (you accumulate 5,000 kg or more):  
Type(s) Managed:  
Destination Facility for Universal Waste:

NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing  
Tax Identification #: 11604847324  
Handler Status:

Operator Information

Name: Occidental Chemical Corporation  
Phone: 361-776-6050  
Address: PO BOX CC  
INGLESIDE, TX 78362-0710  
Owner Information:  
Name: Occidental Chemical Corporation  
Phone: 361-776-6050  
Address: PO BOX CC  
INGLESIDE, TX 78362-0710

Billing Contact:  
Billing Address: PO BOX CC  
INGLESIDE, TX 78362-0710  
Title:   
Phone: 361-776-6240

Other Contact: Manager, Environmental  
Mailing Address: PO BOX CC  
INGLESIDE, TX 78362-0710  
Role: IHW: Owner Contact  
Phone: 361-776-6050

As of 08/13/2025 - The next unassigned sequence number for WASTES is 9451 and  
The next unassigned sequence number for UNITS is 134



## Industrial and Hazardous Waste

[illegible]

| 0016202H                                                                             | H | Active | 08/13/2025 | On & Off | No | No |
|--------------------------------------------------------------------------------------|---|--------|------------|----------|----|----|
| <b>Description from Generator:</b> Oxy Vinyls La Porte Chlorinated By-product        |   |        |            |          |    |    |
| <b>Texas Form Code:</b> 202 Halogenated (e.g., chlorinated) solvent                  |   |        |            |          |    |    |
| <b>EPA Form Code:</b> W219 Other organic liquid                                      |   |        |            |          |    |    |
| <b>Origin Code:</b> 4 Received from off-site and was not recycled or treated on-site |   |        |            |          |    |    |
| <b>Source Code:</b> G24 Solvent or product distillation recovery (sludge, waste)     |   |        |            |          |    |    |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing             |   |        |            |          |    |    |

|         |                        |
|---------|------------------------|
| 022     | Container storage area |
| 065 066 | Incinerator            |
| 082 023 | Tank (surface)         |

**Description from Generator:** Lab packs (NH) resulting from disposal of laboratory chemicals; 12/93

|          |   |        |            |          |    |
|----------|---|--------|------------|----------|----|
| 0075001H | H | Active | 08/13/2025 | Off-site | No |
| 0075001H | H | Active | 08/13/2025 | Off-site | No |

Company's Internal Code(s): CC0075

|          |   |        |            |          |    |
|----------|---|--------|------------|----------|----|
| 01003902 | 2 | Active | 08/13/2025 | On & Off | No |
|----------|---|--------|------------|----------|----|

**Company's Internal Code(s):** CC0100

|                                  |                                  |     |
|----------------------------------|----------------------------------|-----|
| <b>Current Management Units:</b> | Container storage area           | 103 |
|                                  | Miscellaneous storage containers | 072 |

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| 01029992                                                                                                                                                                                                                        | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Plant trash from offices and plant production. Includes paper, glass, scrapmetal, plastic, wood, empty containers.                                                                           |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 999 Class 2 plant trash                                                                                                                                                                                 |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0102                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103                                                                                                                                                                     |             |        |                |                         |              |                     |
| Miscellaneous storage containers 071                                                                                                                                                                                            |             |        |                |                         |              |                     |
|                                                                                                                                                                                                                                 |             |        |                |                         |              |                     |
| 01049022                                                                                                                                                                                                                        | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Supplemental plant production refuse from manufacture of chlorine, caustic soda,ethylene dichloride. This includes metal parts, floor sweepings, and scrap materials. Initial generation 198 |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 902 Class 2 supplemental plant production refuse                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0104                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103                                                                                                                                                                     |             |        |                |                         |              |                     |
| Miscellaneous storage containers 071                                                                                                                                                                                            |             |        |                |                         |              |                     |
|                                                                                                                                                                                                                                 |             |        |                |                         |              |                     |
| 0106489H                                                                                                                                                                                                                        | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Clean up of fuel / lubrication oil spills, leaks, and drips                                                                                                                                  |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 489 Petroleum contaminated solids                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W409 Other organic solids                                                                                                                                                                                 |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Source Code:</b> G09 Other production or service-related processes                                                                                                                                                           |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0106                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D040                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 067 022                                                                                                                                                                 |             |        |                |                         |              |                     |
| Miscellaneous storage containers 125                                                                                                                                                                                            |             |        |                |                         |              |                     |
|                                                                                                                                                                                                                                 |             |        |                |                         |              |                     |
| 01073101                                                                                                                                                                                                                        | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Clean up of oil and fuel spills. Estimated initial date of generation 1988.                                                                                                                  |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 310 Spent solid filters or adsorbents                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal                                                                                                                                  |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0107                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103 101                                                                                                                                                                 |             |        |                |                         |              |                     |
| Miscellaneous storage containers 035 072 128 125                                                                                                                                                                                |             |        |                |                         |              |                     |

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                      | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                             |             |        |                |                         |              |                     |
| 0108407H                                                                                                                              | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Solvent contaminated material generated from maintenance activities.                               |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 407 Other halogenated organic solids                                                                          |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W409 Other organic solids                                                                                       |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                    |             |        |                |                         |              |                     |
| <b>Source Code:</b> G09 Other production or service-related processes                                                                 |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing                                                                         |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0108                                                                                             |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D040 F001 F003                                                                                    |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 022                                                                           |             |        |                |                         |              |                     |
| 0110114I                                                                                                                              | 1           | Active | 08/13/2025     | Off-site                | No           | No                  |
| <b>Description from Generator:</b> Co-generation wastewater stream                                                                    |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 114 Other aqueous waste with low dissolved solids                                                             |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                    |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0110                                                                                             |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 072                                                                 |             |        |                |                         |              |                     |
| Sump 092 091                                                                                                                          |             |        |                |                         |              |                     |
| Tank 093 094                                                                                                                          |             |        |                |                         |              |                     |
| 01134092                                                                                                                              | 2           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Waste is generated during the disassembly/demolition or the construction of onsite cooling towers. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 409 Other non-halogenated organic solids                                                                      |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                    |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0113                                                                                             |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 105                                                                           |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                                  |             |        |                |                         |              |                     |
| 0114319I                                                                                                                              | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Cooling tower repairs, Initial generation 1988.                                                    |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                              |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                    |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0114                                                                                             |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103                                                                           |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                                  |             |        |                |                         |              |                     |

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                   | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio- active | TCEQ Audit Complete |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|---------------|---------------------|
| ***** Active Wastes *****                                                                                                                          |             |        |                |                         |               |                     |
| 0117211H                                                                                                                                           | H           | Active | 08/13/2025     | On & Off                | No            | No                  |
| <b>Description from Generator:</b> Spent paint thinner is generated during plant maintenance activities. Initial generation is estimated in 1988.  |             |        |                |                         |               |                     |
| <b>Texas Form Code:</b> 211 Paint thinner or petroleum distillates                                                                                 |             |        |                |                         |               |                     |
| <b>EPA Form Code:</b> W211 Paint thinner or petroleum distillates                                                                                  |             |        |                |                         |               |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                 |             |        |                |                         |               |                     |
| <b>Source Code:</b> G06 Painting and coating                                                                                                       |             |        |                |                         |               |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                           |             |        |                |                         |               |                     |
| <b>Company's Internal Code(s):</b> CC0117                                                                                                          |             |        |                |                         |               |                     |
| <b>EPA Hazardous Waste Numbers:</b> D001 F003 F005                                                                                                 |             |        |                |                         |               |                     |
| <b>Current Management Units:</b> Container storage area 113 022                                                                                    |             |        |                |                         |               |                     |
| Distillation/Solvent recovery unit 095                                                                                                             |             |        |                |                         |               |                     |
| Miscellaneous storage containers 125                                                                                                               |             |        |                |                         |               |                     |
|                                                                                                                                                    |             |        |                |                         |               |                     |
| 01184091                                                                                                                                           | 1           | Active | 08/13/2025     | On & Off                | No            | No                  |
| <b>Description from Generator:</b> Waste Perманite Powder from maintenance activities.                                                             |             |        |                |                         |               |                     |
| <b>Texas Form Code:</b> 409 Other non-halogenated organic solids                                                                                   |             |        |                |                         |               |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                 |             |        |                |                         |               |                     |
| <b>Company's Internal Code(s):</b> CC0118                                                                                                          |             |        |                |                         |               |                     |
| <b>Current Management Units:</b> Container storage area 103                                                                                        |             |        |                |                         |               |                     |
| Miscellaneous storage containers 072                                                                                                               |             |        |                |                         |               |                     |
|                                                                                                                                                    |             |        |                |                         |               |                     |
| 0121319H                                                                                                                                           | H           | Active | 08/13/2025     | On-site                 | No            | No                  |
| <b>Description from Generator:</b> Broken lamps generated during replacement and maintenance of lights.                                            |             |        |                |                         |               |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                           |             |        |                |                         |               |                     |
| <b>EPA Form Code:</b> W319 Other inorganic solids                                                                                                  |             |        |                |                         |               |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                 |             |        |                |                         |               |                     |
| <b>Source Code:</b> G09 Other production or service-related processes                                                                              |             |        |                |                         |               |                     |
| <b>NAICS Code:</b> 324110 Petroleum Refineries                                                                                                     |             |        |                |                         |               |                     |
| <b>Company's Internal Code(s):</b> CC0121                                                                                                          |             |        |                |                         |               |                     |
| <b>EPA Hazardous Waste Numbers:</b> D009                                                                                                           |             |        |                |                         |               |                     |
| <b>Current Management Units:</b> Container storage area 022 067 113                                                                                |             |        |                |                         |               |                     |
| Miscellaneous storage containers 125                                                                                                               |             |        |                |                         |               |                     |
|                                                                                                                                                    |             |        |                |                         |               |                     |
| 01323192                                                                                                                                           | 2           | Active | 08/13/2025     | On & Off                | No            | No                  |
| <b>Description from Generator:</b> Bead blaster material is generated from the cleaning of the maintenance beadblaster machine which cleans parts. |             |        |                |                         |               |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                           |             |        |                |                         |               |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                 |             |        |                |                         |               |                     |
| <b>Company's Internal Code(s):</b> CC0132                                                                                                          |             |        |                |                         |               |                     |
| <b>Current Management Units:</b> Container storage area 103                                                                                        |             |        |                |                         |               |                     |
| Miscellaneous storage containers 072                                                                                                               |             |        |                |                         |               |                     |



## 38280

| Texas Waste Code                                                                                                                                     | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                            |             |        |                |                         |              |                     |
| 0136206H                                                                                                                                             | H           | Active | 08/13/2025     | Off-site                | No           | No                  |
| <b>Description from Generator:</b> Waste oil generated during maintenance of pumps or other oil containing equipment.                                |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 206 Waste oil                                                                                                                |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W206 Waste oil                                                                                                                 |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                   |             |        |                |                         |              |                     |
| <b>Source Code:</b> G16 Oil changes and filter or battery replacement                                                                                |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                             |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0136                                                                                                            |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D001 F001 F002                                                                                                   |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 022 113 067                                                                                  |             |        |                |                         |              |                     |
| Incinerator 066 065                                                                                                                                  |             |        |                |                         |              |                     |
| Miscellaneous storage containers 125                                                                                                                 |             |        |                |                         |              |                     |
| 01372962                                                                                                                                             | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Waste Antifreeze                                                                                                  |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 296 Ethylene glycol based antifreeze                                                                                         |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                   |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0137                                                                                                            |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 128 072                                                                            |             |        |                |                         |              |                     |
| 0138219H                                                                                                                                             | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Unused resin material used for fiberglass work.                                                                   |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 219 Other organic liquids                                                                                                    |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W219 Other organic liquid                                                                                                      |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                   |             |        |                |                         |              |                     |
| <b>Source Code:</b> G11 Discarding off-specification or out-of-date chemicals or products                                                            |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                             |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0138                                                                                                            |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D001 D003                                                                                                        |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 022                                                                                          |             |        |                |                         |              |                     |
| 0139219H                                                                                                                                             | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Unused sealant/adhesive that was not used during maintenance activities that is no longer needed, or out of spec. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 219 Other organic liquids                                                                                                    |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W219 Other organic liquid                                                                                                      |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                   |             |        |                |                         |              |                     |
| <b>Source Code:</b> G11 Discarding off-specification or out-of-date chemicals or products                                                            |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                             |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0139                                                                                                            |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D001                                                                                                             |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 067 022                                                                                      |             |        |                |                         |              |                     |

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Date: 08/14/2025

# Notice of Registration Industrial and Hazardous Waste

# OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                                                                                                                                                                                                        | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                                                                                                                                                                                                               |             |        |                |                         |              |                     |
| 0140209H                                                                                                                                                                                                                                                                                                                                                                                                                | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Unused varnish used as coating on insulation work.                                                                                                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 209 Organic paint, ink, lacquer, or varnish                                                                                                                                                                                                                                                                                                                                                     |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W209 Paint, ink, lacquer, or varnish                                                                                                                                                                                                                                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                      |             |        |                |                         |              |                     |
| <b>Source Code:</b> G09 Other production or service-related processes                                                                                                                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                                                                                                                                                |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0140                                                                                                                                                                                                                                                                                                                                                                               |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D001                                                                                                                                                                                                                                                                                                                                                                                |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 022                                                                                                                                                                                                                                                                                                                                                             |             |        |                |                         |              |                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |             |        |                |                         |              |                     |
| 0141210I                                                                                                                                                                                                                                                                                                                                                                                                                | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Unused epoxy/adhesive that was not used during maintenance, and is no longer needed, and it is out of spec.                                                                                                                                                                                                                                                                          |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 210 Adhesives or epoxies                                                                                                                                                                                                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                      |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0141                                                                                                                                                                                                                                                                                                                                                                               |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103                                                                                                                                                                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                                                                                                                                                                                                                                                                                                                    |             |        |                |                         |              |                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |             |        |                |                         |              |                     |
| 0142319I                                                                                                                                                                                                                                                                                                                                                                                                                | 1           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Waste fireproofing from maintenance activities                                                                                                                                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                                                                                                                                                                                                |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                      |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0142                                                                                                                                                                                                                                                                                                                                                                               |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103                                                                                                                                                                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                                                                                                                                                                                                                                                                                                                    |             |        |                |                         |              |                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |             |        |                |                         |              |                     |
| 0150102I                                                                                                                                                                                                                                                                                                                                                                                                                | 1           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Wastewater from organic process units and facility stormwater collected in sumpsand/or dikes. The water is steam stripped to recover organics. The tails fromthe steam strippers become "wastewater" which is processed in a biological wastewater treatment system. The steam stripper tails are analyzed periodically toverify that organic concentrations are less than TCLP limi |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 102 Aqueous waste with low other toxic organics                                                                                                                                                                                                                                                                                                                                                 |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                      |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0150                                                                                                                                                                                                                                                                                                                                                                               |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 072                                                                                                                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| Sump 016 062 015                                                                                                                                                                                                                                                                                                                                                                                                        |             |        |                |                         |              |                     |
| Tank (surface) 032 040 043 060 045 047 059 037 031 038 036 042 041 044 049 039 046 061 017                                                                                                                                                                                                                                                                                                                              |             |        |                |                         |              |                     |



## 38280

| Texas Waste Code                                                                                                                                      | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                             |             |        |                |                         |              |                     |
| 01513071                                                                                                                                              | 1           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Rust/scale that is removed from decontaminated process equipment                                                   |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 307 Metal scale, filings or scrap                                                                                             |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                    |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0151                                                                                                             |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 084 067                                                                                       |             |        |                |                         |              |                     |
| Miscellaneous storage containers 035                                                                                                                  |             |        |                |                         |              |                     |
| 0152319H                                                                                                                                              | H           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Spent sandblasting media used to clean process equipment and vessels.                                              |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                              |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W319 Other inorganic solids                                                                                                     |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                    |             |        |                |                         |              |                     |
| <b>Source Code:</b> G19 Other one-time or intermittent processes                                                                                      |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                              |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0152                                                                                                             |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D008                                                                                                              |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 067                                                                                           |             |        |                |                         |              |                     |
| 01604881                                                                                                                                              | 1           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Spent railroad ties are generated when wooden railroad ties are removed from service and can no longer be used.    |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 488 Wood debris                                                                                                               |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                    |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC 0160                                                                                                            |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 072                                                                                 |             |        |                |                         |              |                     |
| 01734902                                                                                                                                              | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Sandblasting sand used in daily maintenance activities throughout the plant. Initial date of generation was 06/87. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 490 Sand blasting waste                                                                                                       |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                    |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0173                                                                                                             |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 067 103 107 127                                                                               |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072 083                                                                                                              |             |        |                |                         |              |                     |



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## 38280

| Texas Waste Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |             |        |                |                         |              |                     |
| 01792061                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Used oil generated from equipment oil change outs.<br><b>Texas Form Code:</b> 206 Waste oil<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC0179<br><b>Current Management Units:</b> Container storage area 112 103<br>Miscellaneous storage containers 128 072                                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| 0180309H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Battery changeout<br><b>Texas Form Code:</b> 309 Batteries or battery parts, casings, cores<br><b>EPA Form Code:</b> W309 Batteries, battery parts, cores, casings<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Source Code:</b> G16 Oil changes and filter or battery replacement<br><b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing<br><b>Company's Internal Code(s):</b> CC0180<br><b>EPA Hazardous Waste Numbers:</b> D004<br><b>Current Management Units:</b> Container storage area 113 022 |             |        |                |                         |              |                     |
| 01843101                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Used oil filters<br><b>Texas Form Code:</b> 310 Spent solid filters or adsorbents<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC0184<br><b>Current Management Units:</b> Container storage area 103<br>Miscellaneous storage containers 072 128 125                                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| 01853192                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Drained, non-PCB electrical equipment (capacitors and transformers)<br><b>Texas Form Code:</b> 319 Other waste inorganic solids<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC0185<br><b>Current Management Units:</b> Container storage area 103<br>Miscellaneous storage containers 072                                                                                                                                                                                                 |             |        |                |                         |              |                     |

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## 38280

| Texas Waste Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |        |                |                         |              |                     |
| 01863191                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b><br>Drained, oil-containing equipment removed from service. Oil is drained from equipment.<br><b>Texas Form Code:</b> 319 Other waste inorganic solids<br><b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal<br><b>Company's Internal Code(s):</b> CC0186<br><b>Current Management Units:</b> Container storage area 103<br>Miscellaneous storage containers 072 035                                                                                                                                                                                                               |             |        |                |                         |              |                     |
| 01873192                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b><br>Activated alumina used as a desiccant throughout the plant. White ball form.<br><b>Texas Form Code:</b> 319 Other waste inorganic solids<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC0187<br><b>Current Management Units:</b> Container storage area 103<br>Miscellaneous storage containers 072                                                                                                                                                                                                                                         |             |        |                |                         |              |                     |
| 01884061                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b><br>RCRA empty containers - drums, totes, etc. from industrial water treatment chemicals and oil.<br><b>Texas Form Code:</b> 406 Empty fiber or plastic containers<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC0188<br><b>Current Management Units:</b> Container storage area 070 087 067 104<br>Miscellaneous storage containers 072                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| 0190404H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b><br>spent carbon canisters from aerosol can puncturing devices<br><b>Texas Form Code:</b> 404 Spent carbon<br><b>EPA Form Code:</b> W310 Filters, solid adsorbents, ion exchange resins and spent carbon<br><b>Origin Code:</b> 5 Residual from on-site treatment, disposal or recycling of hazardous waste<br><b>Source Code:</b> G21 Air pollution control devices (baghouse dust, etc.)<br><b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing<br><b>Company's Internal Code(s):</b> CC0190<br><b>EPA Hazardous Waste Numbers:</b> D040<br><b>Current Management Units:</b> Container storage area 022 |             |        |                |                         |              |                     |

## 38280

| Texas Waste Code                                                                                                              | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|-------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                     |             |        |                |                         |              |                     |
| 01914891                                                                                                                      | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> HARDENED ASPHALT                                                                           |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 489 Petroleum contaminated solids                                                                     |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                            |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0191                                                                                     |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103                                                                   |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                          |             |        |                |                         |              |                     |
| 0192204H                                                                                                                      | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Residue from spray cans that have been punctured.                                          |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 204 Halogenated/non-halogenated solvent mixture                                                       |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W204 Concentrated halogenated/ non-halogenated solvent mixture                                          |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                            |             |        |                |                         |              |                     |
| <b>Source Code:</b> G19 Other one-time or intermittent processes                                                              |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                      |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0192                                                                                     |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D001 D040                                                                                 |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 022                                                                   |             |        |                |                         |              |                     |
| 01933192                                                                                                                      | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> uncontaminated fire brick material from periodic maintenance or turnaroundactivities       |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                      |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                            |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0193                                                                                     |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103                                                                   |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072 035                                                                                      |             |        |                |                         |              |                     |
| 01943192                                                                                                                      | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Uncontaminated plastic packing removed during periodic maintenance orturnaround activities |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                      |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                            |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0194                                                                                     |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103                                                                   |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072 035                                                                                      |             |        |                |                         |              |                     |

## Date: 08/14/2025

Date: 08/14/2025

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                  | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|---------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                         |             |        |                |                         |              |                     |
| 02003192                                                                                          | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> waste fireproofing material                                    |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                          |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0200                                                         |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103 085                                   |             |        |                |                         |              |                     |
| Miscellaneous storage containers 035 072                                                          |             |        |                |                         |              |                     |
| 0202211H                                                                                          | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Waste Gasoline                                                 |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 211 Paint thinner or petroleum distillates                                |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W211 Paint thinner or petroleum distillates                                 |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                |             |        |                |                         |              |                     |
| <b>Source Code:</b> G19 Other one-time or intermittent processes                                  |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                          |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0202                                                         |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D001 D018                                                     |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 022 113                                   |             |        |                |                         |              |                     |
| Miscellaneous storage containers 125                                                              |             |        |                |                         |              |                     |
| 0203211H                                                                                          | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Spill of curing agent.                                         |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 211 Paint thinner or petroleum distillates                                |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W211 Paint thinner or petroleum distillates                                 |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal    |             |        |                |                         |              |                     |
| <b>Source Code:</b> G19 Other one-time or intermittent processes                                  |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                          |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0203                                                         |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D001                                                          |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 067 022                                   |             |        |                |                         |              |                     |
| 02043012                                                                                          | 2           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Spill materials from release of corrosion inhibitor to ground. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 301 Soil contaminated with organics                                       |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0204                                                         |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 073                                       |             |        |                |                         |              |                     |



38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                                                                                                                                                                                                               | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                                                                                                                                                                                                                      |             |        |                |                         |              |                     |
| 02052192                                                                                                                                                                                                                                                                                                                                                                                                                       | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Unused/Unspent firefighting foam in plastic totes that have solidified due to weathering on the container.                                                                                                                                                                                                                                                                                  |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 219 Other organic liquids                                                                                                                                                                                                                                                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 3 Derived from on-site management of a nonhazardous waste                                                                                                                                                                                                                                                                                                                                                  |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0205                                                                                                                                                                                                                                                                                                                                                                                      |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 072                                                                                                                                                                                                                                                                                                                                                          |             |        |                |                         |              |                     |
| 0226319H                                                                                                                                                                                                                                                                                                                                                                                                                       | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Heavy Ends tank cleaning residue combined with reboiler / exchanger scale.                                                                                                                                                                                                                                                                                                                  |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W319 Other inorganic solids                                                                                                                                                                                                                                                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| <b>Source Code:</b> G09 Other production or service-related processes                                                                                                                                                                                                                                                                                                                                                          |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0226                                                                                                                                                                                                                                                                                                                                                                                      |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D001 D007 D019 D022 D028 D032 D040 K019 K020                                                                                                                                                                                                                                                                                                                                               |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 084 022 113 067 087                                                                                                                                                                                                                                                                                                                                                    |             |        |                |                         |              |                     |
| 02274912                                                                                                                                                                                                                                                                                                                                                                                                                       | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Dewatered biological treatment sludge ( biomass) is generated from wastewater treatment plants operated at this facility. (a) VCM Unit - initial generation 4091; generation rate is approximately 4500 Y/yr. color of waste is white to brown. (b) EDC Unit - initial generation 1981; generation rate is approximately 400Y/yr. color of waste is brown to black due to iron hydroxides.1 |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 491 Dewatered biological treatment sludge                                                                                                                                                                                                                                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0227                                                                                                                                                                                                                                                                                                                                                                                      |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 107 084 087 115                                                                                                                                                                                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 072                                                                                                                                                                                                                                                                                                                                                          |             |        |                |                         |              |                     |
| 0228491H                                                                                                                                                                                                                                                                                                                                                                                                                       | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Dewatered biological treatment sludge (biomass) is generated from the wastewatertreatment plant operated at this facility. The stream is designated hazardous due to the derived from rule meets treatment standards associated with K019, K020, F001, F003, F005, F025.                                                                                                                    |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 491 Dewatered biological treatment sludge                                                                                                                                                                                                                                                                                                                                                              |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W409 Other organic solids                                                                                                                                                                                                                                                                                                                                                                                |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| <b>Source Code:</b> G23 Wastewater treatment (sludge, filter cake, etc.)                                                                                                                                                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0228                                                                                                                                                                                                                                                                                                                                                                                      |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> F001 F003 F005 F025 K019 K020                                                                                                                                                                                                                                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 115 087 106 113                                                                                                                                                                                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Tank (surface) 042                                                                                                                                                                                                                                                                                                                                                                            |             |        |                |                         |              |                     |



38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                     | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                            |             |        |                |                         |              |                     |
| 02403191                                                                                                                                                             | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> VCM process area trench material (non-hazardous)                                                                                  |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                             |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                   |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0240                                                                                                                            |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 089 087 073 067 106 109 084 115 107 113 114 068                                                              |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                                                                 |             |        |                |                         |              |                     |
| 0241301H                                                                                                                                                             | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Solvent contaminated media (typically soil) is generated during spill clean-up and/or general plant cleanup in the EDC/VCM units. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 301 Soil contaminated with organics                                                                                                          |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W301 Contaminated Soil                                                                                                                         |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal                                                                       |             |        |                |                         |              |                     |
| <b>Source Code:</b> G32 Cleanup of spill residues                                                                                                                    |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                             |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0241                                                                                                                            |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D028 K019 K020 U043 U077                                                                                                         |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area                                                                                                              |             |        |                |                         |              |                     |
| 0242303H                                                                                                                                                             | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Incinerator firebox solids from VCM Incinerators F-550 AND F-570.                                                                 |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 303 Ash, slag or other residue from incineration of waste                                                                                    |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W303 Ash                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 5 Residual from on-site treatment, disposal or recycling of hazardous waste                                                                      |             |        |                |                         |              |                     |
| <b>Source Code:</b> G19 Other one-time or intermittent processes                                                                                                     |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing                                                                                                        |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0242                                                                                                                            |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> F001 F003 F005 F025 K019 K020                                                                                                    |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area                                                                                                              |             |        |                |                         |              |                     |
| 0243319H                                                                                                                                                             | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Incinerator brick generated when VCM unit incinerators are cleaned out or rebricked.                                              |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                             |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W319 Other inorganic solids                                                                                                                    |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                   |             |        |                |                         |              |                     |
| <b>Source Code:</b> G09 Other production or service-related processes                                                                                                |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                             |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0243                                                                                                                            |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> F001 F003 F005 F025 K019 K020                                                                                                    |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area                                                                                                              |             |        |                |                         |              |                     |

## Industrial and Hazardous Waste

| Texas Waste Code                                                                                                                                                                                                                                                                                                                                                                                                                            | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| 0244407H                                                                                                                                                                                                                                                                                                                                                                                                                                    | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> VCM Furnace Coke - carbon residue; 12/91                                                                                                                                                                                                                                                                                                                                                                 |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 407 Other halogenated organic solids                                                                                                                                                                                                                                                                                                                                                                                |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W409 Other organic solids                                                                                                                                                                                                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                                          |             |        |                |                         |              |                     |
| <b>Source Code:</b> G19 Other one-time or intermittent processes                                                                                                                                                                                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                                                                                                                                                                    |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0244                                                                                                                                                                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D001 D006 D007 D028 D043                                                                                                                                                                                                                                                                                                                                                                                |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 022 113 067                                                                                                                                                                                                                                                                                                                                                                         |             |        |                |                         |              |                     |
| 02453931                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Unused and spent copper chloride catalyst is generated during periodic catalyst change-outs. Miscellaneous items (plastic, trash, personal protective equipment) used during catalyst handling is also included. Containers are not necessarily packed similarly (e.g. some containers primarily catalyst, others contain primarily the miscellaneous items). Estimated date of initial generation 4090. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 393 Catalyst waste                                                                                                                                                                                                                                                                                                                                                                                                  |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                                          |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0245                                                                                                                                                                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 073 084 106 087 067 103 068                                                                                                                                                                                                                                                                                                                                                         |             |        |                |                         |              |                     |
| <b>Miscellaneous storage containers</b> 072                                                                                                                                                                                                                                                                                                                                                                                                 |             |        |                |                         |              |                     |
| 0246393H                                                                                                                                                                                                                                                                                                                                                                                                                                    | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> spent copper chloride catalyst generated during periodic reactor clean-outs, plastic, trash, ppe may be included.                                                                                                                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 393 Catalyst waste                                                                                                                                                                                                                                                                                                                                                                                                  |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W319 Other inorganic solids                                                                                                                                                                                                                                                                                                                                                                                           |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                                          |             |        |                |                         |              |                     |
| <b>Source Code:</b> G08 Removal of spent process liquids or catalysts                                                                                                                                                                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                                                                                                                                                                    |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0246                                                                                                                                                                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D028                                                                                                                                                                                                                                                                                                                                                                                                    |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 068 067 073 087 113 106 022 084                                                                                                                                                                                                                                                                                                                                                     |             |        |                |                         |              |                     |
| 0247319H                                                                                                                                                                                                                                                                                                                                                                                                                                    | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> VCM process area contaminated trench material/sludge                                                                                                                                                                                                                                                                                                                                                     |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                                                                                                                                                                                                                    |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W319 Other inorganic solids                                                                                                                                                                                                                                                                                                                                                                                           |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                                          |             |        |                |                         |              |                     |
| <b>Source Code:</b> G32 Cleanup of spill residues                                                                                                                                                                                                                                                                                                                                                                                           |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing                                                                                                                                                                                                                                                                                                                                                                               |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0247                                                                                                                                                                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D028 D043 K019 K020 U077                                                                                                                                                                                                                                                                                                                                                                                |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 087 084 022 073 113                                                                                                                                                                                                                                                                                                                                                                 |             |        |                |                         |              |                     |

## 38280

| Texas Waste Code                                                                                                                                                                                                                                                                                                                                                                                                                                | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| 0248219H                                                                                                                                                                                                                                                                                                                                                                                                                                        | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> VCM unit heavy ends are generating during the purification of EDC in the process. The waste is typically piped to the hazardous waste feed tanks and then piped to one of the two on-site incinerators. VCM unit heavy ends can also be managed as a permitted on-site incinerators. VCM unit heavy ends can also be managed as a permitted off-site TSDF. Tank truck or drum packaging could be utilized fo |             |        |                |                         |              |                     |
| Texas Form Code: 219 Other organic liquids                                                                                                                                                                                                                                                                                                                                                                                                      |             |        |                |                         |              |                     |
| EPA Form Code: W219 Other organic liquid                                                                                                                                                                                                                                                                                                                                                                                                        |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                                                     |             |        |                |                         |              |                     |
| Source Code: G24 Solvent or product distillation recovery (sludge, waste)                                                                                                                                                                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                                                                                                                                                                               |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0248                                                                                                                                                                                                                                                                                                                                                                                                              |             |        |                |                         |              |                     |
| EPA Hazardous Waste Numbers: D001 D019 D021 D022 D027 D028 D029 D032 D033 D034                                                                                                                                                                                                                                                                                                                                                                  |             |        |                |                         |              |                     |
| D036 D039 D040 K019 K020                                                                                                                                                                                                                                                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 022                                                                                                                                                                                                                                                                                                                                                                                     |             |        |                |                         |              |                     |
| Incinerator 066 065                                                                                                                                                                                                                                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| Tank (surface) 023 082                                                                                                                                                                                                                                                                                                                                                                                                                          |             |        |                |                         |              |                     |
| 0249310H                                                                                                                                                                                                                                                                                                                                                                                                                                        | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Filters contaminated with vinyl chloride monomer, ethylene dichloride, and heavyand light ends; 12/91                                                                                                                                                                                                                                                                                                        |             |        |                |                         |              |                     |
| Texas Form Code: 310 Spent solid filters or adsorbents                                                                                                                                                                                                                                                                                                                                                                                          |             |        |                |                         |              |                     |
| EPA Form Code: W310 Filters, solid adsorbents, ion exchange resins and spent carbon                                                                                                                                                                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                                                     |             |        |                |                         |              |                     |
| Source Code: G19 Other one-time or intermittent processes                                                                                                                                                                                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                                                                                                                                                                               |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0249                                                                                                                                                                                                                                                                                                                                                                                                              |             |        |                |                         |              |                     |
| EPA Hazardous Waste Numbers: D043 F025                                                                                                                                                                                                                                                                                                                                                                                                          |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 022                                                                                                                                                                                                                                                                                                                                                                                     |             |        |                |                         |              |                     |
| 0250404H                                                                                                                                                                                                                                                                                                                                                                                                                                        | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Spent carbon contaminated with vinyl chloride                                                                                                                                                                                                                                                                                                                                                                |             |        |                |                         |              |                     |
| Texas Form Code: 404 Spent carbon                                                                                                                                                                                                                                                                                                                                                                                                               |             |        |                |                         |              |                     |
| EPA Form Code: W310 Filters, solid adsorbents, ion exchange resins and spent carbon                                                                                                                                                                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                                                     |             |        |                |                         |              |                     |
| Source Code: G19 Other one-time or intermittent processes                                                                                                                                                                                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                                                                                                                                                                               |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0250                                                                                                                                                                                                                                                                                                                                                                                                              |             |        |                |                         |              |                     |
| EPA Hazardous Waste Numbers: D028 D043                                                                                                                                                                                                                                                                                                                                                                                                          |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 022                                                                                                                                                                                                                                                                                                                                                                                     |             |        |                |                         |              |                     |

**\*\*\* TEXAS COMMISSION ON ENVIRONMENTAL QUALITY \*\*\***  
**Notice of Registration**  
**Industrial and Hazardous Waste**

| Texas<br>Waste<br>Code | Waste<br>Class | Date of<br>Status | Managed<br>Onsite/<br>Offsite | Radio-<br>active | TCEQ Audit<br>Complete |
|------------------------|----------------|-------------------|-------------------------------|------------------|------------------------|
|------------------------|----------------|-------------------|-------------------------------|------------------|------------------------|

\*\*\*\*\*  
**Active Wastes**  
\*\*\*\*\*

|                                                                                                                                                                                                                                                                                                                                                                                                               |   |        |            |          |    |    |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|--------|------------|----------|----|----|--|
| 0251219H                                                                                                                                                                                                                                                                                                                                                                                                      | H | Active | 08/13/2025 | On & Off | No | No |  |
| <b>Description from Generator:</b> VCM Light Ends are generated at the VCM Unit during the purification process. Estimated initial generation date 4Q91.                                                                                                                                                                                                                                                      |   |        |            |          |    |    |  |
| <b>Texas Form Code:</b> 219 Other organic liquids                                                                                                                                                                                                                                                                                                                                                             |   |        |            |          |    |    |  |
| <b>EPA Form Code:</b> W219 Other organic liquid                                                                                                                                                                                                                                                                                                                                                               |   |        |            |          |    |    |  |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                            |   |        |            |          |    |    |  |
| <b>Source Code:</b> G24 Solvent or product distillation recovery (sludge, waste)                                                                                                                                                                                                                                                                                                                              |   |        |            |          |    |    |  |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                                                                                                                                      |   |        |            |          |    |    |  |
| <b>Company's Internal Code(s):</b> CC0251                                                                                                                                                                                                                                                                                                                                                                     |   |        |            |          |    |    |  |
| <b>EPA Hazardous Waste Numbers:</b> D001 D018 D019 D022 D028 D029 D040 F025                                                                                                                                                                                                                                                                                                                                   |   |        |            |          |    |    |  |
| <b>Current Management Units:</b> Incinerator<br>Tank (surface)                                                                                                                                                                                                                                                                                                                                                |   |        |            |          |    |    |  |
|                                                                                                                                                                                                                                                                                                                                                                                                               |   |        |            |          |    |    |  |
| 02523192                                                                                                                                                                                                                                                                                                                                                                                                      | 2 | Active | 08/13/2025 | On & Off | No | No |  |
| <b>Description from Generator:</b> Wastewater stripper packing. Packing in wastewater trippers must be periodically replaced. Prior to maintenance activities, column (& packing) is decontaminated by steaming until column tails are <0.5ppm 1,2-dichloroethane. Decontaminated packing 80-100%; miscellaneous (packaging materials from replacement catalyst, protective equipment) 0-20%.                 |   |        |            |          |    |    |  |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                                                                                                                                                                                      |   |        |            |          |    |    |  |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                            |   |        |            |          |    |    |  |
| <b>Company's Internal Code(s):</b> CC0252                                                                                                                                                                                                                                                                                                                                                                     |   |        |            |          |    |    |  |
| <b>Current Management Units:</b> Container storage area<br>Miscellaneous storage containers                                                                                                                                                                                                                                                                                                                   |   |        |            |          |    |    |  |
|                                                                                                                                                                                                                                                                                                                                                                                                               |   |        |            |          |    |    |  |
| 0253306H                                                                                                                                                                                                                                                                                                                                                                                                      | H | Active | 08/13/2025 | On & Off | No | No |  |
| <b>Description from Generator:</b> Limestone sludge is generated during neutralization of HCl generated during incineration of chlorinated organics. The material is dewatered and collected in containers. The stream is designated hazardous due to derived-from rule but meets present treatment standards associated with K019, K020, F025 light ends, F001,F003, F005. Initial date of generation 10/91. |   |        |            |          |    |    |  |
| <b>Texas Form Code:</b> 306 "Dry" lime or metal hydroxide solids not "fixed"                                                                                                                                                                                                                                                                                                                                  |   |        |            |          |    |    |  |
| <b>EPA Form Code:</b> W501 Lime and/or metal hydroxide sludges and solids with no cyanides                                                                                                                                                                                                                                                                                                                    |   |        |            |          |    |    |  |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                            |   |        |            |          |    |    |  |
| <b>Source Code:</b> G23 Wastewater treatment (sludge, filter cake, etc.)                                                                                                                                                                                                                                                                                                                                      |   |        |            |          |    |    |  |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                                                                                                                                      |   |        |            |          |    |    |  |
| <b>Company's Internal Code(s):</b> CC0253                                                                                                                                                                                                                                                                                                                                                                     |   |        |            |          |    |    |  |
| <b>EPA Hazardous Waste Numbers:</b> F001 F003 F005 F025 K019 K020                                                                                                                                                                                                                                                                                                                                             |   |        |            |          |    |    |  |
| <b>Current Management Units:</b> Container storage area<br>Tank (surface)                                                                                                                                                                                                                                                                                                                                     |   |        |            |          |    |    |  |
|                                                                                                                                                                                                                                                                                                                                                                                                               |   |        |            |          |    |    |  |
| 02543061                                                                                                                                                                                                                                                                                                                                                                                                      | 1 | Active | 08/13/2025 | On & Off | No | No |  |
| <b>Description from Generator:</b> Limestone sludge is generated during neutralization of HCl generated during incineration of chlorinated organics. The m                                                                                                                                                                                                                                                    |   |        |            |          |    |    |  |
| <b>Texas Form Code:</b> 306 "Dry" lime or metal hydroxide solids not "fixed"                                                                                                                                                                                                                                                                                                                                  |   |        |            |          |    |    |  |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                            |   |        |            |          |    |    |  |
| <b>Company's Internal Code(s):</b> CC0254                                                                                                                                                                                                                                                                                                                                                                     |   |        |            |          |    |    |  |
| <b>Current Management Units:</b> Container storage area<br>Miscellaneous storage containers<br>Tank (surface)                                                                                                                                                                                                                                                                                                 |   |        |            |          |    |    |  |

## 38280

| Texas Waste Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             |        |                |                         |              |                     |
| 0255319H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b><br><b>Texas Form Code:</b> 319 Other waste inorganic solids<br><b>EPA Form Code:</b> W319 Other inorganic solids<br><b>Origin Code:</b> 5 Residual from on-site treatment, disposal or recycling of hazardous waste<br><b>Source Code:</b> G19 Other one-time or intermittent processes<br><b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing<br><b>Company's Internal Code(s):</b> CC0255<br><b>EPA Hazardous Waste Numbers:</b> F001 F003 F005 F025 F020<br><b>Current Management Units:</b> Container storage area 087 073 084 068 106<br>Tank (surface) 050                      |             |        |                |                         |              |                     |
| 0256319I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | I           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b><br><b>Texas Form Code:</b> 319 Other waste inorganic solids<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC0256<br><b>Current Management Units:</b> Container storage area 087 068 106 073 084<br>Miscellaneous storage containers 035 072<br>Tank (surface) 050                                                                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| 02573062                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b><br><b>Texas Form Code:</b> Limestone sludge is generated during neutralization of Hcl generated during incineration of chlorinated organics<br><b>Origin Code:</b> 306 "Dry" lime or metal hydroxide solids not "fixed"<br><b>Source Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC0257<br><b>Current Management Units:</b> Container storage area 107 106 115 087<br>Miscellaneous storage containers 072 035<br>Tank (surface) 058 053 056 054 055 050 057                                                                            |             |        |                |                         |              |                     |
| 0258219H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b><br><b>Texas Form Code:</b> Mother Liquor from direct chlorination reactor in the VCM unit.<br><b>EPA Form Code:</b> 219 Other organic liquids<br><b>Origin Code:</b> W219 Other organic liquid<br><b>Source Code:</b> 1 Generated on-site from a product process or service activity<br><b>NAICS Code:</b> G24 Solvent or product distillation recovery (sludge, waste)<br><b>Company's Internal Code(s):</b> 325199 All Other Basic Organic Chemical Manufacturing<br>CC0258<br><b>EPA Hazardous Waste Numbers:</b> D001 K019 K020<br><b>Current Management Units:</b> Container storage area 022 089 068 |             |        |                |                         |              |                     |





## Date: 08/14/2025

Date: 08/14/2025





## 38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                            | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|---------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                   |             |        |                |                         |              |                     |
| 0294319H                                                                                                                                    | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Sandfilter Sand                                                                                          |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                    |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W319 Other inorganic solids                                                                                           |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                          |             |        |                |                         |              |                     |
| <b>Source Code:</b> G23 Wastewater treatment (sludge, filter cake, etc.)                                                                    |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                    |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0294                                                                                                   |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> F001 F003 F005 F025 K019 K020                                                                           |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 073 106 113 068 087 107                                                             |             |        |                |                         |              |                     |
| Miscellaneous storage containers 035                                                                                                        |             |        |                |                         |              |                     |
| 0295319H                                                                                                                                    | H           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Spiking solution contaminated solids.                                                                    |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                    |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W002 Contaminated debris: paper, clothing, rags, wood, empty fiber or plastic containers, glass, piping, other solids |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                          |             |        |                |                         |              |                     |
| <b>Source Code:</b> G19 Other one-time or intermittent processes                                                                            |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                    |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0295                                                                                                   |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D007 D008                                                                                               |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 022                                                                                 |             |        |                |                         |              |                     |
| 02962111                                                                                                                                    | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Waste polymer generated from wastewater treatment process.                                               |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 211 Paint thinner or petroleum distillates                                                                          |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                          |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0296                                                                                                   |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 070 103 113                                                                         |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                                        |             |        |                |                         |              |                     |
| Tank (surface) 059                                                                                                                          |             |        |                |                         |              |                     |
| 02973022                                                                                                                                    | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Cooling Tower sludge generated from the clean-out of cooling tower basins                                |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 302 Soil contaminated with inorganics only                                                                          |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                          |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC-0297                                                                                                  |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 105                                                                                 |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                                        |             |        |                |                         |              |                     |









| Texas Waste Code | Waste Class | Date of Status | Managed Onsite/ Offsite | Radioactive | TCEQ Audit Complete |
|------------------|-------------|----------------|-------------------------|-------------|---------------------|
| 000000           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000001           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000002           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000003           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000004           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000005           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000006           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000007           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000008           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000009           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000010           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000011           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000012           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000013           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000014           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000015           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000016           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000017           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000018           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000019           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000020           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000021           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000022           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000023           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000024           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000025           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000026           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000027           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000028           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000029           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000030           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000031           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000032           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000033           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000034           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000035           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000036           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000037           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000038           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000039           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000040           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000041           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000042           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000043           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000044           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000045           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000046           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000047           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000048           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000049           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000050           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000051           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000052           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000053           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000054           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000055           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000056           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000057           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000058           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000059           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000060           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000061           | Other       | 01/01/2000     | Onsite                  | 0           | 0                   |
| 000062           | Other       | 01/01/2000     | Onsite                  | 0           |                     |

| No         | Off-site | No |
|------------|----------|----|
| 0407103H   | Active   | No |
| 08/13/2025 | Active   | No |

|                                     |   |        |                                                                                                                                                                                                       |          |      |      |
|-------------------------------------|---|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------|------|
| 0407103H                            | H | Active | 08/13/2025                                                                                                                                                                                            | Off-site | No   | No   |
| <b>Description from Generator:</b>  |   |        | COD Digestion Solution waste generated during the process of analyzing waste water for Chemical Oxygen Demand. This waste contains sulfuric acid, mercuric sulfate, silver sulfate, and chromic acid. |          |      |      |
| <b>Texas Form Code:</b>             |   |        | 103 Spent acid with metals                                                                                                                                                                            |          |      |      |
| <b>EPA Form Code:</b>               |   |        | W119 Other inorganic liquid                                                                                                                                                                           |          |      |      |
| <b>Origin Code:</b>                 |   |        | 1 Generated on-site from a product process or service activity                                                                                                                                        |          |      |      |
| <b>Source Code:</b>                 |   |        | G22 Laboratory analytical wastes (used chemicals)                                                                                                                                                     |          |      |      |
| <b>NAICS Code:</b>                  |   |        | 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                 |          |      |      |
| <b>Company's Internal Code(s):</b>  |   |        | CC0407                                                                                                                                                                                                |          |      |      |
| <b>EPA Hazardous Waste Numbers:</b> |   |        | D002                                                                                                                                                                                                  | D007     | D009 | D011 |
| <b>Current Management Units:</b>    |   |        | None                                                                                                                                                                                                  |          |      |      |

|                                                                                                                                                                                                                                              |   |        |            |                                  |     |    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|--------|------------|----------------------------------|-----|----|
| 04083191                                                                                                                                                                                                                                     | 1 | Active | 08/13/2025 | On & Off                         | No  | No |
| <b>Description from Generator:</b> Contaminated nonhazardous inorganic solids are generated during spill clean-up and/or general work activities associated with the chlorine recovery process equipment. Estimated initial generation 1991. |   |        |            |                                  |     |    |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                     |   |        |            |                                  |     |    |
| <b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal                                                                                                                                               |   |        |            |                                  |     |    |
| <b>Company's Internal Code(s):</b> CC0408                                                                                                                                                                                                    |   |        |            |                                  |     |    |
| <b>Current Management Units:</b>                                                                                                                                                                                                             |   |        |            |                                  |     |    |
|                                                                                                                                                                                                                                              |   |        |            | Container storage area           | 103 |    |
|                                                                                                                                                                                                                                              |   |        |            | Miscellaneous storage containers | 072 |    |

|                                                                                                                                                       |   |        |            |                                  |     |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|---|--------|------------|----------------------------------|-----|-----|
| 04104092                                                                                                                                              | 2 | Active | 08/13/2025 | On & Off                         | No  | No  |
| <b>Description from Generator:</b> Clean-out of Brine Ponds to facilitate inspection of pond liner. Solids/dirt sediment removed from bottom of pond. |   |        |            |                                  |     |     |
| <b>Texas Form Code:</b> 409 Other non-halogenated organic solids                                                                                      |   |        |            |                                  |     |     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                    |   |        |            |                                  |     |     |
| <b>Company's Internal Code(s):</b> CC0410                                                                                                             |   |        |            |                                  |     |     |
| <b>Current Management Units:</b>                                                                                                                      |   |        |            |                                  |     |     |
|                                                                                                                                                       |   |        |            | Container storage area           | 070 |     |
|                                                                                                                                                       |   |        |            | Miscellaneous storage containers | 072 | 035 |

|                                                                                                                                                                                                                                                           |   |        |            |         |    |    |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|--------|------------|---------|----|----|--|
| 0411319H                                                                                                                                                                                                                                                  | H | Active | 08/13/2025 | On-site | No | No |  |
| <b>Description from Generator:</b> Chlorine butter contaminated solids. Waste is generated when equipment/PPE/debris becomes contaminated with chlorinated resin that is formed on the walls of fiberglass piping and vessels in the chlorine drying area |   |        |            |         |    |    |  |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                                  |   |        |            |         |    |    |  |
| <b>EPA Form Code:</b> W002 Contaminated debris: paper, clothing, rags, wood, empty fiber or plastic containers, glass, piping, other solids                                                                                                               |   |        |            |         |    |    |  |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                        |   |        |            |         |    |    |  |
| <b>Source Code:</b> G09 Other production or service-related processes                                                                                                                                                                                     |   |        |            |         |    |    |  |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                  |   |        |            |         |    |    |  |
| <b>Company's Internal Code(s):</b> CC 0411                                                                                                                                                                                                                |   |        |            |         |    |    |  |
| <b>EPA Hazardous Waste Numbers:</b> D019 D022 D032 D034 D037 D039 D040                                                                                                                                                                                    |   |        |            |         |    |    |  |
| <b>Current Management Units:</b> Miscellaneous storage containers 035                                                                                                                                                                                     |   |        |            |         |    |    |  |

# Notice of Registration Industrial and Hazardous Waste

| Texas Waste Code                                                                                                                                                                                                                                     | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio- active | TCEQ Audit Complete |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|---------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                                            |             |        |                |                         |               |                     |
| 04122061                                                                                                                                                                                                                                             | 1           | Active | 08/13/2025     | On-site                 | No            | No                  |
| <b>Description from Generator:</b> Refrigerant-contaminated oil removed from the Chlor-Alkali refrigeration system during maintenance activities                                                                                                     |             |        |                |                         |               |                     |
| <b>Texas Form Code:</b> 206 Waste oil                                                                                                                                                                                                                |             |        |                |                         |               |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                   |             |        |                |                         |               |                     |
| <b>Company's Internal Code(s):</b> CC0412                                                                                                                                                                                                            |             |        |                |                         |               |                     |
| <b>Current Management Units:</b> Container storage area 104                                                                                                                                                                                          |             |        |                |                         |               |                     |
| 04153191                                                                                                                                                                                                                                             | 1           | Active | 08/13/2025     | On & Off                | No            | No                  |
| <b>Description from Generator:</b> Alkaline contaminated solids are generated during intermittent maintenance activities (pig-out caustic transfer line, caustic filter replacements) and/or caustic spills. Estimated initial generation date 1988. |             |        |                |                         |               |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                             |             |        |                |                         |               |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                   |             |        |                |                         |               |                     |
| <b>Company's Internal Code(s):</b> CC0415                                                                                                                                                                                                            |             |        |                |                         |               |                     |
| <b>Current Management Units:</b> Container storage area 070 076 108 103                                                                                                                                                                              |             |        |                |                         |               |                     |
| Miscellaneous storage containers 035 072                                                                                                                                                                                                             |             |        |                |                         |               |                     |
| 04163192                                                                                                                                                                                                                                             | 2           | Active | 08/13/2025     | On & Off                | No            | No                  |
| <b>Description from Generator:</b> Class 2 alkaline contaminated solids are generated during intermittent maintenance activities and/or caustic spills.                                                                                              |             |        |                |                         |               |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                             |             |        |                |                         |               |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                   |             |        |                |                         |               |                     |
| <b>Company's Internal Code(s):</b> CC0416                                                                                                                                                                                                            |             |        |                |                         |               |                     |
| <b>Current Management Units:</b> Container storage area 108 103 076                                                                                                                                                                                  |             |        |                |                         |               |                     |
| Miscellaneous storage containers 035 072                                                                                                                                                                                                             |             |        |                |                         |               |                     |
| 04203191                                                                                                                                                                                                                                             | 1           | Active | 08/13/2025     | On & Off                | No            | No                  |
| <b>Description from Generator:</b> Acid contaminated solids generated from a maintenance activity and or spill clean up.                                                                                                                             |             |        |                |                         |               |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                             |             |        |                |                         |               |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                   |             |        |                |                         |               |                     |
| <b>Company's Internal Code(s):</b> CC0420                                                                                                                                                                                                            |             |        |                |                         |               |                     |
| <b>Current Management Units:</b> Container storage area 103 070                                                                                                                                                                                      |             |        |                |                         |               |                     |
| Miscellaneous storage containers 072 035                                                                                                                                                                                                             |             |        |                |                         |               |                     |
| 04703191                                                                                                                                                                                                                                             | 1           | Active | 08/13/2025     | On-site                 | No            | No                  |
| <b>Description from Generator:</b> Chlorine process piping and solids are generated during maintenance activities when solids and/or piping are removed from the process.                                                                            |             |        |                |                         |               |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                             |             |        |                |                         |               |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                   |             |        |                |                         |               |                     |
| <b>Company's Internal Code(s):</b> CC0470                                                                                                                                                                                                            |             |        |                |                         |               |                     |
| <b>Current Management Units:</b> Container storage area 103                                                                                                                                                                                          |             |        |                |                         |               |                     |
| Miscellaneous storage containers 035                                                                                                                                                                                                                 |             |        |                |                         |               |                     |

# OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                                     | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| 0471319H                                                                                                                                                                                                                                             | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b><br>Chlorine process piping and solids are generated during maintenance activities when solids and/or piping are removed from the process                                                                          |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                             |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W319 Other inorganic solids                                                                                                                                                                                                    |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>Source Code:</b> G15 Process equipment change-out or discontinuation of equipment use                                                                                                                                                             |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                             |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0471                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D019                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 022 087 113                                                                                                                                                                                  |             |        |                |                         |              |                     |
| Miscellaneous storage containers 035                                                                                                                                                                                                                 |             |        |                |                         |              |                     |
|                                                                                                                                                                                                                                                      |             |        |                |                         |              |                     |
| 04774032                                                                                                                                                                                                                                             | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b><br>Fiberglass reinforced plastic (FRP) cell heads generated from the routine change-out of the cell heads on the chlorine diaphragm cells in the chlorine cell linearea. Initial date of generation was 08/24/94. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 403 Solids resins or polymerized organics                                                                                                                                                                                    |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0477                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 072                                                                                                                                                                                |             |        |                |                         |              |                     |
|                                                                                                                                                                                                                                                      |             |        |                |                         |              |                     |
| 04903191                                                                                                                                                                                                                                             | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b><br>Ceramic saddles from the C/A units generated during maintenance activities                                                                                                                                     |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                             |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0490                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103 070                                                                                                                                                                                      |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                                                                                                                                                 |             |        |                |                         |              |                     |
|                                                                                                                                                                                                                                                      |             |        |                |                         |              |                     |
| 0494110H                                                                                                                                                                                                                                             | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b><br>Organic contaminated cell renewal wastewater.                                                                                                                                                                  |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 110 Caustic aqueous waste                                                                                                                                                                                                    |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W110 Caustic aqueous waste without cyanides                                                                                                                                                                                    |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Source Code:</b> G32 Cleanup of spill residues                                                                                                                                                                                                    |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                             |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0494                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D002                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 087                                                                                                                                                                                          |             |        |                |                         |              |                     |
| Miscellaneous storage containers 035 033                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| Sump 008                                                                                                                                                                                                                                             |             |        |                |                         |              |                     |

## 38280

| Texas Waste Code                                                                                                      | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|-----------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                             |             |        |                |                         |              |                     |
| 04955192                                                                                                              | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Clean out of solids from C/A process ponds.                                        |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 519 Other inorganic sludges                                                                   |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                    |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0495                                                                             |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 072                                                 |             |        |                |                         |              |                     |
| Surface impoundment 007                                                                                               |             |        |                |                         |              |                     |
| 04961101                                                                                                              | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Organic contaminated cell renewal wastewater. Company Waste Description is CC0496. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 110 Caustic aqueous waste                                                                     |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal                        |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0496                                                                             |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 072                                                 |             |        |                |                         |              |                     |
| Sump 008                                                                                                              |             |        |                |                         |              |                     |
| 0497105H                                                                                                              | H           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Spent Cell renewal dip tank solution                                               |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 105 Acidic aqueous waste                                                                      |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W105 Acidic aqueous wastes less than 5% acid                                                    |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                    |             |        |                |                         |              |                     |
| <b>Source Code:</b> G02 Stripping and acid or caustic cleaning                                                        |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing                                                         |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0497                                                                             |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D002                                                                              |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 100                                                           |             |        |                |                         |              |                     |
| 0498119H                                                                                                              | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Water generated from wash of the Cl2 Recovery piping                               |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 119 Other inorganic liquids                                                                   |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W101 Very dilute aqueous waste containing more than 99% water                                   |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal                        |             |        |                |                         |              |                     |
| <b>Source Code:</b> G13 Cleaning out process equipment                                                                |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing                                                         |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0498                                                                             |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D007                                                                              |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                 |             |        |                |                         |              |                     |

## 38280

| Texas<br>Waste<br>Code | Waste<br>Class | Date of<br>Status | Managed<br>Onsite/<br>Offsite | Radio-<br>active | TCEQ Audit<br>Complete |
|------------------------|----------------|-------------------|-------------------------------|------------------|------------------------|
|------------------------|----------------|-------------------|-------------------------------|------------------|------------------------|

\*\*\*\*\*  
**Active Wastes**  
\*\*\*\*\*

|          |   |        |            |          |    |    |
|----------|---|--------|------------|----------|----|----|
| 05013192 | 2 | Active | 08/13/2025 | On & Off | No | No |
|----------|---|--------|------------|----------|----|----|

**Description from Generator:** Inlet air housing media from Co-gen unit. Water hardness is deposited on media when water is evaporated.

|                                    |        |                                                              |
|------------------------------------|--------|--------------------------------------------------------------|
| <b>Origin Code:</b>                | 1      | Generated on-site from a product process or service activity |
| <b>Company's Internal Code(s):</b> | CC0501 |                                                              |
| <b>Current Management Units:</b>   | 103    | Container storage area                                       |
|                                    | 072    | Miscellaneous storage containers                             |

|                                    |   |        |                                                                |          |    |    |
|------------------------------------|---|--------|----------------------------------------------------------------|----------|----|----|
| 05023102                           | 2 | Active | 08/13/2025                                                     | On & Off | No | No |
| <b>Description from Generator:</b> |   |        |                                                                |          |    |    |
| <b>Texas Form Code:</b>            |   |        | spent Natural Gas Filters                                      |          |    |    |
|                                    |   |        | 310 Spent solid filters or adsorbents                          |          |    |    |
| <b>Origin Code:</b>                |   |        | 1 Generated on-site from a product process or service activity |          |    |    |
| <b>Company's Internal Code(s):</b> |   |        | CC0502                                                         |          |    |    |
| <b>Current Management Units:</b>   |   |        | Container storage area                                         |          |    |    |
|                                    |   |        | Miscellaneous storage containers                               |          |    |    |
|                                    |   |        | 068 103                                                        |          |    |    |
|                                    |   |        | 072                                                            |          |    |    |

|                                                                                    |   |        |            |          |    |    |
|------------------------------------------------------------------------------------|---|--------|------------|----------|----|----|
| 05033192                                                                           | 2 | Active | 08/13/2025 | On & Off | No | No |
| <b>Description from Generator:</b> Ion Exchange Resin                              |   |        |            |          |    |    |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                           |   |        |            |          |    |    |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity |   |        |            |          |    |    |
| <b>Company's Internal Code(s):</b> CC0503                                          |   |        |            |          |    |    |
| <b>Current Management Units:</b> Container storage area 111 103                    |   |        |            |          |    |    |
| Miscellaneous storage containers 118 120 072                                       |   |        |            |          |    |    |

|                                                                                                  |   |        |                                                                |          |    |    |
|--------------------------------------------------------------------------------------------------|---|--------|----------------------------------------------------------------|----------|----|----|
| 0504219H                                                                                         | H | Active | 08/13/2025                                                     | On & Off | No | No |
| <b>Description from Generator:</b> Natural gas used within the Cogen plant has liquids entrained |   |        |                                                                |          |    |    |
| <b>Texas Form Code:</b>                                                                          |   |        | 219 Other organic liquids                                      |          |    |    |
| <b>EPA Form Code:</b>                                                                            |   |        | W219 Other organic liquid                                      |          |    |    |
| <b>Origin Code:</b>                                                                              |   |        | 1 Generated on-site from a product process or service activity |          |    |    |
| <b>Source Code:</b>                                                                              |   |        | G19 Other one-time or intermittent processes                   |          |    |    |
| <b>NAICS Code:</b>                                                                               |   |        | 221121 Electric Bulk Power Transmission and Control            |          |    |    |
| <b>Company's Internal Code(s):</b>                                                               |   |        | CC0504                                                         |          |    |    |
| <b>EPA Hazardous Waste Numbers:</b>                                                              |   |        | D009                                                           |          |    |    |
| <b>Current Management Units:</b>                                                                 |   |        | D018                                                           |          |    |    |
|                                                                                                  |   |        | Container storage area                                         |          |    |    |
|                                                                                                  |   |        | 022                                                            |          |    |    |

38280

## Waste



38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                     | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|--------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                            |             |        |                |                         |              |                     |
| 0601201H                                                                                                                             | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| Description from Generator: Methanol & Water                                                                                         |             |        |                |                         |              |                     |
| Texas Form Code: 201 Concentrated solvent-water solution                                                                             |             |        |                |                         |              |                     |
| EPA Form Code: W203 Concentrated non-halogenated (e.g., non-chlorinated) solvent                                                     |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                          |             |        |                |                         |              |                     |
| Source Code: G09 Other production or service-related processes                                                                       |             |        |                |                         |              |                     |
| NAICS Code: 325110 Petrochemical Manufacturing                                                                                       |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0601                                                                                                   |             |        |                |                         |              |                     |
| EPA Hazardous Waste Numbers: D001 F003                                                                                               |             |        |                |                         |              |                     |
| Current Management Units: Container storage area 067 022 113                                                                         |             |        |                |                         |              |                     |
| Miscellaneous storage containers 126 131 125                                                                                         |             |        |                |                         |              |                     |
| 0602310I                                                                                                                             | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| Description from Generator: V-4240 Spent Filters and Coalescers                                                                      |             |        |                |                         |              |                     |
| Texas Form Code: 310 Spent solid filters or adsorbents                                                                               |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                          |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0602                                                                                                   |             |        |                |                         |              |                     |
| Current Management Units: Miscellaneous storage containers 118 072 125 120 130                                                       |             |        |                |                         |              |                     |
| 0603003H                                                                                                                             | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| Description from Generator: Ethylene Lab Pygas                                                                                       |             |        |                |                         |              |                     |
| Texas Form Code: 003 Mixed lab packs                                                                                                 |             |        |                |                         |              |                     |
| EPA Form Code: W002 Contaminated debris: paper, clothing, rags, wood, empty fiber or plastic containers, glass, piping, other solids |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                          |             |        |                |                         |              |                     |
| Source Code: G22 Laboratory analytical wastes (used chemicals)                                                                       |             |        |                |                         |              |                     |
| NAICS Code: 325110 Petrochemical Manufacturing                                                                                       |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0603                                                                                                   |             |        |                |                         |              |                     |
| EPA Hazardous Waste Numbers: D001 D018                                                                                               |             |        |                |                         |              |                     |
| Current Management Units: Container storage area 022                                                                                 |             |        |                |                         |              |                     |
| 0604388H                                                                                                                             | H           | Active | 08/13/2025     | On-site                 | No           | No                  |
| Description from Generator: Glass vials, wipes, and plastic used for sampling py gas and wipe down after testing is complete.        |             |        |                |                         |              |                     |
| Texas Form Code: 388 Empty or crushed glass containers                                                                               |             |        |                |                         |              |                     |
| EPA Form Code: W319 Other inorganic solids                                                                                           |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                          |             |        |                |                         |              |                     |
| Source Code: G22 Laboratory analytical wastes (used chemicals)                                                                       |             |        |                |                         |              |                     |
| NAICS Code: 325110 Petrochemical Manufacturing                                                                                       |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0604                                                                                                   |             |        |                |                         |              |                     |
| EPA Hazardous Waste Numbers: D001 D018                                                                                               |             |        |                |                         |              |                     |
| Current Management Units: Container storage area 022                                                                                 |             |        |                |                         |              |                     |





38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                   | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                          |             |        |                |                         |              |                     |
| 0613319H                                                                                                                                                                                                                           | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b><br>Water and contaminants that filtered from the plant rain water trenches, water and oil from the water draw off from the gasoline and oil tanks and process water from the Saturator blowdown |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b><br>319 Other waste inorganic solids                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b><br>W319 Other inorganic solids                                                                                                                                                                               |             |        |                |                         |              |                     |
| <b>Origin Code:</b><br>1 Generated on-site from a product process or service activity                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Source Code:</b><br>G14 Removal of tank sludge, sediments or slag                                                                                                                                                               |             |        |                |                         |              |                     |
| <b>NAICS Code:</b><br>324110 Petroleum Refineries                                                                                                                                                                                  |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b><br>CC0613                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b><br>D018                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Current Management Units:</b><br>Container storage area 113 067 022<br>Miscellaneous storage containers 118 125                                                                                                                 |             |        |                |                         |              |                     |
| 0614304I                                                                                                                                                                                                                           | I           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b><br>Coke from inside ethane cracking furnace coils that had spalled off and was collected in coke catcher during normal operations, and contains moisture.                                       |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b><br>304 Other "dry" ash, slag or thermal residue                                                                                                                                                            |             |        |                |                         |              |                     |
| <b>Origin Code:</b><br>1 Generated on-site from a product process or service activity                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b><br>CC0614                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Current Management Units:</b><br>Miscellaneous storage containers 118 120                                                                                                                                                       |             |        |                |                         |              |                     |
| 0615206H                                                                                                                                                                                                                           | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b><br>New unused wash oil that was recovered while off loading into the wash oil tank.                                                                                                             |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b><br>206 Waste oil                                                                                                                                                                                           |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b><br>W206 Waste oil                                                                                                                                                                                            |             |        |                |                         |              |                     |
| <b>Origin Code:</b><br>1 Generated on-site from a product process or service activity                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Source Code:</b><br>G11 Discarding off-specification or out-of-date chemicals or products                                                                                                                                       |             |        |                |                         |              |                     |
| <b>NAICS Code:</b><br>324110 Petroleum Refineries                                                                                                                                                                                  |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b><br>CC0615                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b><br>U165                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Current Management Units:</b><br>Container storage area 113 022 067<br>Miscellaneous storage containers 125                                                                                                                     |             |        |                |                         |              |                     |
| 06163192                                                                                                                                                                                                                           | 2           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b><br>The waste is generated after steam cleaning and hydro blasting the debutanizer reboiler A&B.                                                                                                 |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b><br>319 Other waste inorganic solids                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Origin Code:</b><br>1 Generated on-site from a product process or service activity                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b><br>CC0616                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Current Management Units:</b><br>Miscellaneous storage containers 125                                                                                                                                                           |             |        |                |                         |              |                     |

# Notice of Registration Industrial and Hazardous Waste

| Texas Waste Code                                                                                                                                                                                                                                | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| 0617219H                                                                                                                                                                                                                                        | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Waste is from Ethylene Caustic Tanks where caustic is used to scrub out sulfides after furnace cracking.                                                                                                     |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 219 Other organic liquids                                                                                                                                                                                               |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W219 Other organic liquid                                                                                                                                                                                                 |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Source Code:</b> G14 Removal of tank sludge, sediments or slag                                                                                                                                                                               |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 324110 Petroleum Refineries                                                                                                                                                                                                  |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0617                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D002                                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 125                                                                                                                                                                           |             |        |                |                         |              |                     |
| 0618319I                                                                                                                                                                                                                                        | 1           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Waste is generated by reacting spent caustic with steam and air to a state that effluent can be treated easily at bio treater. Prior to shutting unit down, reactor is flushed clean with boiler feed water. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0618                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 125                                                                                                                                                                           |             |        |                |                         |              |                     |
| 0619489H                                                                                                                                                                                                                                        | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> PPE and Rags used to clean drums and equipment while unused wash oil is recovered during off loading into the wash oil tank.                                                                                 |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 489 Petroleum contaminated solids                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W206 Waste oil                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Source Code:</b> G11 Discarding off-specification or out-of-date chemicals or products                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 324110 Petroleum Refineries                                                                                                                                                                                                  |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0619                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> U165                                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 125                                                                                                                                                                           |             |        |                |                         |              |                     |
| 06203192                                                                                                                                                                                                                                        | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Refractory removed from Ethylene thermal oxidizers during maintenance or clean-outs for repairs.                                                                                                             |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC-0620                                                                                                                                                                                                      |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 125 121                                                                                                                                                                       |             |        |                |                         |              |                     |

## 38280

| Texas Waste | Waste Class | Date of Status | Managed Onsite/ | Radioactive | TCEQ Audit Complete |
|-------------|-------------|----------------|-----------------|-------------|---------------------|
|             |             |                |                 |             |                     |

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**Active Wastes**  
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|                                                                |   |        |            |          |    |    |
|----------------------------------------------------------------|---|--------|------------|----------|----|----|
| 06213192                                                       | 2 | Active | 08/13/2025 | On & Off | No | No |
| <b>Description from Generator:</b>                             |   |        |            |          |    |    |
| Insulation that was contaminated in the P3 binary area.        |   |        |            |          |    |    |
| <b>Texas Form Code:</b>                                        |   |        |            |          |    |    |
| 319 Other waste inorganic solids                               |   |        |            |          |    |    |
| <b>Origin Code:</b>                                            |   |        |            |          |    |    |
| 1 Generated on-site from a product process or service activity |   |        |            |          |    |    |
| <b>Company's Internal Code(s):</b>                             |   |        |            |          |    |    |
| CC-0621                                                        |   |        |            |          |    |    |
| <b>Current Management Units:</b>                               |   |        |            |          |    |    |
| Miscellaneous storage containers                               |   |        |            |          |    |    |
| 125                                                            |   |        |            |          |    |    |

|                                    |   |        |                                                                                                  |          |    |    |
|------------------------------------|---|--------|--------------------------------------------------------------------------------------------------|----------|----|----|
| 06223191                           | 1 | Active | 08/13/2025                                                                                       | On & Off | No | No |
| <b>Description from Generator:</b> |   |        |                                                                                                  |          |    |    |
| <b>Texas Form Code:</b>            |   |        | Prior to shutting unit down, caustic tanks are drained and flushed clean with boiler feed water. |          |    |    |
| 319                                |   |        | Other waste inorganic solids                                                                     |          |    |    |
| <b>Origin Code:</b>                |   |        | 1 Generated on-site from a product process or service activity                                   |          |    |    |
| <b>Company's Internal Code(s):</b> |   |        | CC0622                                                                                           |          |    |    |
| <b>Current Management Units:</b>   |   |        | Miscellaneous storage containers                                                                 |          |    |    |
|                                    |   |        | 072 125                                                                                          |          |    |    |

|                                                                                                                             |   |        |            |                                  |     |    |
|-----------------------------------------------------------------------------------------------------------------------------|---|--------|------------|----------------------------------|-----|----|
| 06233931                                                                                                                    | 1 | Active | 08/13/2025 | On & Off                         | No  | No |
| <b>Description from Generator:</b> SCR removed from Ethylene and VCM furnaces during maintenance or clean-outs for repairs. |   |        |            |                                  |     |    |
| <b>Texas Form Code:</b> 393 Catalyst waste                                                                                  |   |        |            |                                  |     |    |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                          |   |        |            |                                  |     |    |
| <b>Company's Internal Code(s):</b> CC0623                                                                                   |   |        |            |                                  |     |    |
| <b>Current Management Units:</b>                                                                                            |   |        |            |                                  |     |    |
|                                                                                                                             |   |        |            | Container storage area           | 087 |    |
|                                                                                                                             |   |        |            | Miscellaneous storage containers | 118 |    |

|                                                                                                                              |   |        |                                                                |          |    |         |
|------------------------------------------------------------------------------------------------------------------------------|---|--------|----------------------------------------------------------------|----------|----|---------|
| 06243102                                                                                                                     | 2 | Active | 08/13/2025                                                     | On & Off | No | No      |
| <b>Description from Generator:</b> MOLSIVE/DENSTONE WAS USED IN C-4281 A&B DRYERS TO REMOVE RESIDUAL MOISTURE FROM ETHYLENE. |   |        |                                                                |          |    |         |
| <b>Texas Form Code:</b>                                                                                                      |   |        | 310 Spent solid filters or adsorbents                          |          |    |         |
| <b>Origin Code:</b>                                                                                                          |   |        | 1 Generated on-site from a product process or service activity |          |    |         |
| <b>Company's Internal Code(s):</b>                                                                                           |   |        | CC0624                                                         |          |    |         |
| <b>Current Management Units:</b>                                                                                             |   |        | Miscellaneous storage containers                               |          |    | 125 130 |

|                                                                                                                                                 |   |        |            |          |    |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------|---|--------|------------|----------|----|----|
| 06253102                                                                                                                                        | 2 | Active | 08/13/2025 | On & Off | No | No |
| <b>Description from Generator:</b>                                                                                                              |   |        |            |          |    |    |
| The molsive/denstone was used in C-4335 Ethylene Dryer to remove residual moisture from ethylene. Dryers were steamed cleaned prior to opening. |   |        |            |          |    |    |
| <b>Texas Form Code:</b>                                                                                                                         |   |        |            |          |    |    |
| 310 Spent solid filters or adsorbents                                                                                                           |   |        |            |          |    |    |
| <b>Origin Code:</b>                                                                                                                             |   |        |            |          |    |    |
| 1 Generated on-site from a product process or service activity                                                                                  |   |        |            |          |    |    |
| <b>Company's Internal Code(s):</b>                                                                                                              |   |        |            |          |    |    |
| CC0625                                                                                                                                          |   |        |            |          |    |    |
| <b>Current Management Units:</b>                                                                                                                |   |        |            |          |    |    |
| Miscellaneous storage containers 130                                                                                                            |   |        |            |          |    |    |

# Notice of Registration Industrial and Hazardous Waste

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**Active Wastes**  
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OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                   | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                          |             |        |                |                         |              |                     |
| 0631310H                                                                                                                                                                                                                           | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Filter socks used to screen process wastewater into trenches to collect and filter debris and process waste water.                                                                              |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 310 Spent solid filters or adsorbents                                                                                                                                                                      |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W310 Filters, solid adsorbents, ion exchange resins and spent carbon                                                                                                                                         |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                 |             |        |                |                         |              |                     |
| <b>Source Code:</b> G19 Other one-time or intermittent processes                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                           |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0631                                                                                                                                                                                          |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D018                                                                                                                                                                                           |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 126 125                                                                                                                                                          |             |        |                |                         |              |                     |
| 06323192                                                                                                                                                                                                                           | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Solids were generated during hydro blasting of equipment at the temporary hydro blast pad that contained NORM.The solids were vacuumed out of the sump and trenches around the hydro blast pad. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                           |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                 |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0632                                                                                                                                                                                          |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 133                                                                                                                                                              |             |        |                |                         |              |                     |
| 06333102                                                                                                                                                                                                                           | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Activated carbon used to screen process wastewater to purify the process wastewater.                                                                                                            |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 310 Spent solid filters or adsorbents                                                                                                                                                                      |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                 |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0633                                                                                                                                                                                          |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 130 126 131 133 132                                                                                                                                              |             |        |                |                         |              |                     |
| 06343192                                                                                                                                                                                                                           | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> The packing from C-4220 Quench Tower was removed from equipment during maintenance/shutdown work and replaced. Equipment and packing were steamed cleaned prior to opening.                     |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                           |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                 |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0634                                                                                                                                                                                          |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 130                                                                                                                                                              |             |        |                |                         |              |                     |

# Notice of Registration Industrial and Hazardous Waste

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**Active Wastes**  
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## OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                             | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                    |             |        |                |                         |              |                     |
| 07033101                                                                                                                                                     | 1           | Active | 08/13/2025     | Off-site                | No           | No                  |
| <b>Description from Generator:</b> Waste was generated on 9/19/2018. The molsiv was used in dryers C-9160 A and B to remove residual moisture from Ethylene. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 310 Spent solid filters or adsorbents                                                                                                |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal                                                               |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC-0703                                                                                                                   |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                        |             |        |                |                         |              |                     |
| 07044041                                                                                                                                                     | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Ethylene Activated Carbon                                                                                                 |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 404 Spent carbon                                                                                                                     |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                           |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC-0704                                                                                                                   |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 072                                                                                        |             |        |                |                         |              |                     |
| 07051131                                                                                                                                                     | 1           | Active | 08/13/2025     | Off-site                | No           | No                  |
| <b>Description from Generator:</b> Water used to flush through the Markham C-9160 A and B dryers                                                             |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 113 Other aqueous waste with high dissolved solids                                                                                   |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                           |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC-0705                                                                                                                   |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                        |             |        |                |                         |              |                     |
| 07061132                                                                                                                                                     | 2           | Active | 08/13/2025     | Off-site                | No           | No                  |
| <b>Description from Generator:</b> Waste was generated from a process regeneration.                                                                          |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 113 Other aqueous waste with high dissolved solids                                                                                   |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                           |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC-0706                                                                                                                   |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                        |             |        |                |                         |              |                     |
| 08002071                                                                                                                                                     | 1           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Waste is biocide used during commission.                                                                                  |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 207 Concentrated aqueous solution of other organics                                                                                  |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                           |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC-0800                                                                                                                   |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 125                                                                                        |             |        |                |                         |              |                     |
| 08012011                                                                                                                                                     | 1           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Waste name is PC-45.                                                                                                      |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 201 Concentrated solvent-water solution                                                                                              |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                           |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC-801                                                                                                                    |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 125                                                                                        |             |        |                |                         |              |                     |

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                 | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                        |             |        |                |                         |              |                     |
| 08022011                                                                                                                                                                                                                         | 1           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Waste Name is CW-1007.                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 201 Concentrated solvent-water solution                                                                                                                                                                  |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                               |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC-802                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 125                                                                                                                                                            |             |        |                |                         |              |                     |
| 08033192                                                                                                                                                                                                                         | 2           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> New Unused refractory mortar.                                                                                                                                                                 |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                         |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                               |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0803                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 125                                                                                                                                                            |             |        |                |                         |              |                     |
| 0804201H                                                                                                                                                                                                                         | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> One Time Shipment: Waste was generated when Nalco tote failed at the valve and leaked into secondary containment during a rain event. Was cleaned up with Petroclean and placed back in tote. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 201 Concentrated solvent-water solution                                                                                                                                                                  |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W219 Other organic liquid                                                                                                                                                                                  |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal                                                                                                                                   |             |        |                |                         |              |                     |
| <b>Source Code:</b> G11 Discarding off-specification or out-of-date chemicals or products                                                                                                                                        |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 324110 Petroleum Refineries                                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CONT NALCO PROD                                                                                                                                                                               |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D001                                                                                                                                                                                         |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 125                                                                                                                                                            |             |        |                |                         |              |                     |
| 0805119H                                                                                                                                                                                                                         | H           | Active | 08/13/2025     | Off-site                | No           | No                  |
| <b>Description from Generator:</b> One time Shipment: Out-dated chemicals.                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 119 Other inorganic liquids                                                                                                                                                                              |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W119 Other inorganic liquid                                                                                                                                                                                |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                               |             |        |                |                         |              |                     |
| <b>Source Code:</b> G11 Discarding off-specification or out-of-date chemicals or products                                                                                                                                        |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325110 Petrochemical Manufacturing                                                                                                                                                                            |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0805                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D036 U169                                                                                                                                                                                    |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                            |             |        |                |                         |              |                     |

\*\*\* TEXAS COMMISSION ON ENVIRONMENTAL QUALITY \*\*\*  
Notice of Registration  
Industrial and Hazardous Waste

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                               | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                      |             |        |                |                         |              |                     |
| 08061191                                                                                       | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Old unused product in unlabeled drums.                      |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 119 Other inorganic liquids                                            |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity             |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0806                                                      |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103                                    |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                           |             |        |                |                         |              |                     |
| 08074062                                                                                       | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Cut up decontaminated totes.                                |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 406 Empty fiber or plastic containers                                  |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity             |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0807                                                      |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103                                    |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                           |             |        |                |                         |              |                     |
| 94501992                                                                                       | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Brine/ Sodium Nitrite. Waste generated on 9/21/2017.        |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 199 Brine solution that could also bear the form code 113              |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC9450                                                      |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 072                          |             |        |                |                         |              |                     |

As of 08/13/2025, The next unassigned sequence number for WASTES is 9451

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Waste Class | Status   | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|----------------|-------------------------|--------------|---------------------|
| *** No Longer Generated Wastes ***                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |          |                |                         |              |                     |
| 01013892                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2           | Inactive | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Sand blast sand<br><b>Texas Form Code:</b> 389 Nonhazardous sandblasting waste<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC0101<br><b>Current Management Units:</b> None                                                                                                                                                                                                                                  |             |          |                |                         |              |                     |
| 01039032                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Plant office refuse from administration building and from offices of engineers,drafters, secretaries, and other clerical workers. This includes paper, cardboard, office supply containers/packages, food packagings, and food wastes. Initial generation 1987.<br><b>Texas Form Code:</b> 903<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> Plant Office Refuse<br><b>Current Management Units:</b> None     |             |          |                |                         |              |                     |
| 01059012                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Plant production refuse from production of chlorine, caustic soda, ethylene dichloride, and vinyl chloride monomer. Initial generation 1987. This includes paper, scrap wood, scrap steel, empty containers, linings, food packaging, food wastes.<br><b>Texas Form Code:</b> 901<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> Plant Production Refuse (CC005, 105)<br><b>Current Management Units:</b> None |             |          |                |                         |              |                     |
| 01113902                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Miscellaneous construction debris will be generated due to improvements and/or repairs to existing plant production areas and plant office areas. Estimated initial date of generation 1988.<br><b>Texas Form Code:</b> 390 Nonhazardous concrete/cement/construction debris<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> Miscellaneous Construction Debris<br><b>Current Management Units:</b> None         |             |          |                |                         |              |                     |
| 01833102                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Metal filters used in various process applications that are uncontaminated; 9/93<br><b>Texas Form Code:</b> 310 Spent solid filters or adsorbents<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> 01833102<br><b>Current Management Units:</b> None                                                                                                                                                             |             |          |                |                         |              |                     |



# OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                                                                          | Waste Class | Status   | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|----------------|-------------------------|--------------|---------------------|
| ** No Longer Generated Wastes **                                                                                                                                                                                                                                                          |             |          |                |                         |              |                     |
| 0199404H                                                                                                                                                                                                                                                                                  | H           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Spent carbon contaminated with 1,2-Dichloroethane; Due to waste minimization, ingredient changes or process changes this waste is no longer generated.                                                                                                 |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 404 Spent carbon                                                                                                                                                                                                                                                  |             |          |                |                         |              |                     |
| <b>EPA Form Code:</b> W310 Filters, solid adsorbents, ion exchange resins and spent carbon                                                                                                                                                                                                |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                        |             |          |                |                         |              |                     |
| <b>Source Code:</b> G19 Other one-time or intermittent processes                                                                                                                                                                                                                          |             |          |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                  |             |          |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0199                                                                                                                                                                                                                                                 |             |          |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D028 U077                                                                                                                                                                                                                                             |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                                                     |             |          |                |                         |              |                     |
| 0265404H                                                                                                                                                                                                                                                                                  | H           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Spent carbon, contaminated with ethylene dichloride.                                                                                                                                                                                                   |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 404 Spent carbon                                                                                                                                                                                                                                                  |             |          |                |                         |              |                     |
| <b>EPA Form Code:</b> W310 Filters, solid adsorbents, ion exchange resins and spent carbon                                                                                                                                                                                                |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                        |             |          |                |                         |              |                     |
| <b>Source Code:</b> G21 Air pollution control devices (baghouse dust, etc.)                                                                                                                                                                                                               |             |          |                |                         |              |                     |
| <b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing                                                                                                                                                                                                                             |             |          |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> Spent carbon, EDC contaminated                                                                                                                                                                                                                         |             |          |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D028                                                                                                                                                                                                                                                  |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                                                     |             |          |                |                         |              |                     |
| 02723192                                                                                                                                                                                                                                                                                  | 2           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Spent molecular sieve from OHC dryer generated when it becomes spent & is replaced. Material is used to dry plant air system at VCM unit & never comes in contact with process.; A new hazardous waste determination has been performed on this waste. |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                                                                  |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                        |             |          |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0272                                                                                                                                                                                                                                                 |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                                                     |             |          |                |                         |              |                     |
| 02863902                                                                                                                                                                                                                                                                                  | 2           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Nonhaz. construction debris includes concrete, rebar, plywood, soil, steelplastic                                                                                                                                                                      |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 390 Nonhazardous concrete/cement/construction debris                                                                                                                                                                                                              |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                        |             |          |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> 02863902                                                                                                                                                                                                                                               |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                                                     |             |          |                |                         |              |                     |

# Notice of Registration Industrial and Hazardous Waste

| Texas Waste Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Waste Class | Status   | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|----------------|-------------------------|--------------|---------------------|
| ** No Longer Generated Wastes **                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |             |          |                |                         |              |                     |
| 0291407H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | H           | Inactive | 08/13/2025     | No                      | No           | No                  |
| <b>Description from Generator:</b> INACTIVE- THIS WASTE CODE WAS ENTERED IN ERROR AND IS A DUPLICATE OF 0267407H. Incinerator Absorber Solids are generated during maintenance or clean-out of incinerator acid absorber system.; Initial waste code determination used in incorrect form and/or classification code or other mistake.<br><div><b>Texas Form Code:</b> 407 Other halogenated organic solids<br/><b>EPA Form Code:</b> W409 Other organic solids<br/><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br/><b>Source Code:</b> G19 Other one-time or intermittent processes<br/><b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing</div> <div><b>Company's Internal Code(s):</b> CC0291<br/><b>EPA Hazardous Waste Numbers:</b> F001 F003 F005 F025 K019 K020<br/><b>Current Management Units:</b> None</div> |             |          |                |                         |              |                     |
| 0303404H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | H           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> contaminated spent carbon generated from EDC tank cleanouts; Due to waste minimization, ingredient changes or process changes this waste is no longer generated.<br><div><b>Texas Form Code:</b> 404 Spent carbon<br/><b>EPA Form Code:</b> W310 Filters, solid adsorbents, ion exchange resins and spent carbon<br/><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br/><b>Source Code:</b> G13 Cleaning out process equipment<br/><b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing</div> <div><b>Company's Internal Code(s):</b> SPENT CARBON<br/><b>EPA Hazardous Waste Numbers:</b> D028 K019<br/><b>Current Management Units:</b> None</div>                                                                                                                                     |             |          |                |                         |              |                     |
| 0424310H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | H           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Contaminated plant waste generated from activities in the chlorine recovery area; 1990; One time shipment.<br><div><b>Texas Form Code:</b> 310 Spent solid filters or adsorbents<br/><b>EPA Form Code:</b> W310 Filters, solid adsorbents, ion exchange resins and spent carbon<br/><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br/><b>Source Code:</b> G19 Other one-time or intermittent processes<br/><b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing</div> <div><b>Company's Internal Code(s):</b> CC0424<br/><b>EPA Hazardous Waste Numbers:</b> D019<br/><b>Current Management Units:</b> None</div>                                                                                                                                                                                  |             |          |                |                         |              |                     |
| 0450110H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | H           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> C/A wastewater from the chlorine-caustic process areas and stormwater. The waste stream may be characteristically hazardous because the pH may be greater than 12.5 (or less than 2 or infrequent basis). Estimated initial generation 1988.<br><div><b>Texas Form Code:</b> 110 Caustic aqueous waste<br/><b>EPA Form Code:</b> W110 Caustic aqueous waste without cyanides<br/><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br/><b>Source Code:</b> G07 Product and by-product processing<br/><b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing</div> <div><b>Company's Internal Code(s):</b> C/A Wastewater (450)<br/><b>EPA Hazardous Waste Numbers:</b> D002<br/><b>Current Management Units:</b> None</div>                                                                              |             |          |                |                         |              |                     |

## Industrial and Hazardous Waste

| Texas Waste Code                                                                                                                                                                                                                                                                      | Waste Class | Status   | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|----------------|-------------------------|--------------|---------------------|
| ** No Longer Generated Wastes **                                                                                                                                                                                                                                                      |             |          |                |                         |              |                     |
| 0460319H                                                                                                                                                                                                                                                                              | H           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Alkali contaminated solids generated from maintenance activities; Initial waste code determination used in incorrect form and/or classification code or other mistake.                                                                             |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                                                              |             |          |                |                         |              |                     |
| <b>EPA Form Code:</b> W319 Other inorganic solids                                                                                                                                                                                                                                     |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                    |             |          |                |                         |              |                     |
| <b>Source Code:</b> G25 Hazardous waste management                                                                                                                                                                                                                                    |             |          |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                              |             |          |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0460                                                                                                                                                                                                                                             |             |          |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D002                                                                                                                                                                                                                                              |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                                                 |             |          |                |                         |              |                     |
| 0478110H                                                                                                                                                                                                                                                                              | H           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Caustic aqueous waste containing petroleum products. Generated by the mixture of aqueous caustic material with petroleum materials in a contractor's unclean vacuum truck. Date of initial generation was April 19, 1995.                          |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 110 Caustic aqueous waste                                                                                                                                                                                                                                     |             |          |                |                         |              |                     |
| <b>EPA Form Code:</b> W110 Caustic aqueous waste without cyanides                                                                                                                                                                                                                     |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                    |             |          |                |                         |              |                     |
| <b>Source Code:</b> G19 Other one-time or intermittent processes                                                                                                                                                                                                                      |             |          |                |                         |              |                     |
| <b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing                                                                                                                                                                                                                         |             |          |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D002                                                                                                                                                                                                                                              |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                                                 |             |          |                |                         |              |                     |
| 0479105H                                                                                                                                                                                                                                                                              | H           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Spent Phosphoric Acid Aqueous Waste from the painting process at the transformers in the Chlor / Alkali Plant. Date of initial generation was July 10, 1995.; Solid waste registration number and facility have temporarily ceased IHW activities. |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 105 Acidic aqueous waste                                                                                                                                                                                                                                      |             |          |                |                         |              |                     |
| <b>EPA Form Code:</b> W105 Acidic aqueous wastes less than 5% acid                                                                                                                                                                                                                    |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                    |             |          |                |                         |              |                     |
| <b>Source Code:</b> G06 Painting and coating                                                                                                                                                                                                                                          |             |          |                |                         |              |                     |
| <b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing                                                                                                                                                                                                                         |             |          |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0479                                                                                                                                                                                                                                             |             |          |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D002                                                                                                                                                                                                                                              |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                                                 |             |          |                |                         |              |                     |
| 0481407H                                                                                                                                                                                                                                                                              | H           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Suction chiller reboiler replaced during turnaround contaminated with 70% Hexachloroethane (D034).; One time shipment.                                                                                                                             |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 407 Other halogenated organic solids                                                                                                                                                                                                                          |             |          |                |                         |              |                     |
| <b>EPA Form Code:</b> W409 Other organic solids                                                                                                                                                                                                                                       |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                    |             |          |                |                         |              |                     |
| <b>Source Code:</b> G15 Process equipment change-out or discontinuation of equipment use                                                                                                                                                                                              |             |          |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                              |             |          |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0481                                                                                                                                                                                                                                             |             |          |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D034                                                                                                                                                                                                                                              |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                                                 |             |          |                |                         |              |                     |

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                 | Waste Class | Status   | Date of Status | Managed Onsite/ Offsite                                                                                                                                                                                                   | Radio-active | TCEQ Audit Complete |
|----------------------------------|-------------|----------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------|
| ** No Longer Generated Wastes ** |             |          |                |                                                                                                                                                                                                                           |              |                     |
| 0482202H                         | H           | Inactive | 08/13/2025     | On & Off                                                                                                                                                                                                                  | No           | No                  |
| Description from Generator:      |             |          |                | Carbon tetrachloride used as a solvent for nitrogen trichloride in the suctionchiller at the chlorine recovery area.; Due to waste minimization, ingredient changes or process changes this waste is no longer generated. |              |                     |
| Texas Form Code:                 |             |          |                | 202 Halogenated (e.g., chlorinated) solvent                                                                                                                                                                               |              |                     |
| EPA Form Code:                   |             |          |                | W202 Concentrated halogenated (e.g., chlorinated) solvent                                                                                                                                                                 |              |                     |
| Origin Code:                     |             |          |                | 2 Result of spill clean-up, equipment decommissioning or emergency removal                                                                                                                                                |              |                     |
| Source Code:                     |             |          |                | G13 Cleaning out process equipment                                                                                                                                                                                        |              |                     |
| NAICS Code:                      |             |          |                | 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                     |              |                     |
| Company's Internal Code(s):      |             |          |                | CC0482                                                                                                                                                                                                                    |              |                     |
| EPA Hazardous Waste Numbers:     |             |          |                | D002                                                                                                                                                                                                                      | D019         | D034                |
| Current Management Units:        |             |          |                | None                                                                                                                                                                                                                      |              |                     |
| 0483202H                         | H           | Inactive | 08/13/2025     | On & Off                                                                                                                                                                                                                  | No           | No                  |
| Description from Generator:      |             |          |                | carbon tetrachloride for process contaminated with water; Solid waste registration number and facility have temporarily ceased IHW activities.                                                                            |              |                     |
| Texas Form Code:                 |             |          |                | 202 Halogenated (e.g., chlorinated) solvent                                                                                                                                                                               |              |                     |
| EPA Form Code:                   |             |          |                | W202 Concentrated halogenated (e.g., chlorinated) solvent                                                                                                                                                                 |              |                     |
| Origin Code:                     |             |          |                | 1 Generated on-site from a product process or service activity                                                                                                                                                            |              |                     |
| Source Code:                     |             |          |                | G11 Discarding off-specification or out-of-date chemicals or products                                                                                                                                                     |              |                     |
| NAICS Code:                      |             |          |                | 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                     |              |                     |
| Company's Internal Code(s):      |             |          |                | CC0483                                                                                                                                                                                                                    |              |                     |
| EPA Hazardous Waste Numbers:     |             |          |                | D002                                                                                                                                                                                                                      | U211         |                     |
| Current Management Units:        |             |          |                | None                                                                                                                                                                                                                      |              |                     |
| 04854092                         | 2           | Inactive | 08/13/2025     | On & Off                                                                                                                                                                                                                  | No           | No                  |
| Description from Generator:      |             |          |                | Spent absorbent contaminated with small amount of methoxypropylamine ( a constituent of the boiler water chemical opti-meen - 80985 ) . Initial date of generation is September 20, 1995.                                 |              |                     |
| Texas Form Code:                 |             |          |                | 409 Other non-halogenated organic solids                                                                                                                                                                                  |              |                     |
| Origin Code:                     |             |          |                | 2 Result of spill clean-up, equipment decommissioning or emergency removal                                                                                                                                                |              |                     |
| Company's Internal Code(s):      |             |          |                | 04854092                                                                                                                                                                                                                  |              |                     |
| Current Management Units:        |             |          |                | None                                                                                                                                                                                                                      |              |                     |
| 0488206H                         | H           | Inactive | 08/13/2025     | On & Off                                                                                                                                                                                                                  | No           | No                  |
| Description from Generator:      |             |          |                | Refrigeration skid sludge from old DuPont carbon tet. recovery unit                                                                                                                                                       |              |                     |
| Texas Form Code:                 |             |          |                | 206 Waste oil                                                                                                                                                                                                             |              |                     |
| EPA Form Code:                   |             |          |                | W206 Waste oil                                                                                                                                                                                                            |              |                     |
| Origin Code:                     |             |          |                | 1 Generated on-site from a product process or service activity                                                                                                                                                            |              |                     |
| Source Code:                     |             |          |                | G15 Process equipment change-out or discontinuation of equipment use                                                                                                                                                      |              |                     |
| NAICS Code:                      |             |          |                | 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                     |              |                     |
| Company's Internal Code(s):      |             |          |                | CC088                                                                                                                                                                                                                     |              |                     |
| EPA Hazardous Waste Numbers:     |             |          |                | D028                                                                                                                                                                                                                      |              |                     |
| Current Management Units:        |             |          |                | None                                                                                                                                                                                                                      |              |                     |



## OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Waste Class | Status   | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|----------------|-------------------------|--------------|---------------------|
| ** No Longer Generated Wastes **                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |          |                |                         |              |                     |
| 91511141                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> ONE TIME WASTE: Boiler Cleaning Fluid used to clean equipment prior to commissioning. Consider waste inactive as of 08/01/1999. Waste inactivated due to product change.<br><b>Texas Form Code:</b> 114 Other aqueous waste with low dissolved solids<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC0151<br><b>Current Management Units:</b> None                                                                                                                                                                            |             |          |                |                         |              |                     |
| 91522971                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1           | Inactive | 08/13/2025     | Off-site                | No           | No                  |
| <b>Description from Generator:</b> ONE TIME WASTE - PCB-contaminated mineral oil. Waste inactivated due to one-time shipment.<br><b>Texas Form Code:</b> 297 Nonhazardous liquids with >= 50 ppm and < 500 ppm PCBs<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC9152<br><b>Current Management Units:</b> None                                                                                                                                                                                                                                                 |             |          |                |                         |              |                     |
| 9153206H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | H           | Inactive | 08/13/2025     | Off-site                | No           | No                  |
| <b>Description from Generator:</b> ONE TIME WASTE - Mineral Oil contaminated with PCBs and spent solvent. Waste inactivated due to one-time shipment.<br><b>Texas Form Code:</b> 206 Waste oil<br><b>EPA Form Code:</b> W206 Waste oil<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Source Code:</b> G15 Process equipment change-out or discontinuation of equipment use<br><b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing<br><b>Company's Internal Code(s):</b> CC9153<br><b>EPA Hazardous Waste Numbers:</b> D001 D028 D040 F001 F002<br><b>Current Management Units:</b> None |             |          |                |                         |              |                     |
| 9154319H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | H           | Inactive | 08/13/2025     | Off-site                | No           | No                  |
| <b>Description from Generator:</b> ONE TIME WASTE - Solids contaminated with PCB-contaminated mineral oil and spent solvents.<br><b>Texas Form Code:</b> 319 Other waste inorganic solids<br><b>EPA Form Code:</b> W319 Other inorganic solids<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Source Code:</b> G16 Oil changes and filter or battery replacement<br><b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing<br><b>Company's Internal Code(s):</b> CC9154<br><b>EPA Hazardous Waste Numbers:</b> F001 F002<br><b>Current Management Units:</b> None                           |             |          |                |                         |              |                     |
| 91553971                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1           | Inactive | 08/13/2025     | Off-site                | No           | No                  |
| <b>Description from Generator:</b> ONE TIME WASTE - PCB capacitors; One time shipment.<br><b>Texas Form Code:</b> 397 Nonhazardous electrical equipment/devices with >= 500 ppm PCBs<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC9155<br><b>Current Management Units:</b> None                                                                                                                                                                                                                                                                                |             |          |                |                         |              |                     |

## Industrial and Hazardous Waste

| Texas Waste Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Waste Class | Status   | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|----------------|-------------------------|--------------|---------------------|
| ** No Longer Generated Wastes **                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             |          |                |                         |              |                     |
| 91564091                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> ONE TIME WASTE - unused hydroquinone; One time shipment.<br><b>Texas Form Code:</b> 409 Other non-halogenated organic solids<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC9156<br><b>Current Management Units:</b> None                                                                                                                                                                                                                                                                                                                                                                                                                          |             |          |                |                         |              |                     |
| 9157301H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | H           | Inactive | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> ONE TIME WASTE - 130 tanks dike sump cleanout material.<br><b>Texas Form Code:</b> 301 Soil contaminated with organics<br><b>EPA Form Code:</b> W301 Contaminated Soil<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Source Code:</b> G14 Removal of tank sludge, sediments or slag<br><b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing<br><b>Company's Internal Code(s):</b> CC9157<br><b>EPA Hazardous Waste Numbers:</b> U077<br><b>Current Management Units:</b> None                                                                                                                                                                                   |             |          |                |                         |              |                     |
| 9158404H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | H           | Inactive | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Used activated carbon removed from the chlorine recovery process.; Due to waste minimization, ingredient changes or process changes this waste is no longer generated.<br><b>Texas Form Code:</b> 404 Spent carbon<br><b>EPA Form Code:</b> W310 Filters, solid adsorbents, ion exchange resins and spent carbon<br><b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal<br><b>Source Code:</b> G15 Process equipment change-out or discontinuation of equipment use<br><b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing<br><b>Company's Internal Code(s):</b> CC9158<br><b>EPA Hazardous Waste Numbers:</b> D019 U211<br><b>Current Management Units:</b> None |             |          |                |                         |              |                     |
| 91723192                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> ONE-TIME WASTE: Stabilization sand for tank foundation. Tank was demolished.; One time shipment.<br><b>Texas Form Code:</b> 319 Other waste inorganic solids<br><b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal<br><b>Company's Internal Code(s):</b> CC9172<br><b>Current Management Units:</b> None                                                                                                                                                                                                                                                                                                                                                                              |             |          |                |                         |              |                     |
| 91953191                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> ONE-TIME WASTE. Permanite powder was left over from a job at the plant site. This waste code should be inactivated by 06/30/2004.; One time shipment.<br><b>Texas Form Code:</b> 319 Other waste inorganic solids<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC9195<br><b>Current Management Units:</b> None                                                                                                                                                                                                                                                                                                                                     |             |          |                |                         |              |                     |



## OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                                                 | Waste Class | Status   | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|----------------|-------------------------|--------------|---------------------|
| ** No Longer Generated Wastes **                                                                                                                                                                                                                                 |             |          |                |                         |              |                     |
| 9197319H                                                                                                                                                                                                                                                         | H           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> ONE-TIME WASTE. Sodium Persulfate material was in the plant warehouse withno identified uses. This waste should be inactivated by 06/30/2004.; One time shipment.                                                             |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                                         |             |          |                |                         |              |                     |
| <b>EPA Form Code:</b> W319 Other inorganic solids                                                                                                                                                                                                                |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                               |             |          |                |                         |              |                     |
| <b>Source Code:</b> G11 Discarding off-specification or out-of-date chemicals or products                                                                                                                                                                        |             |          |                |                         |              |                     |
| <b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing                                                                                                                                                                                                    |             |          |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC9197                                                                                                                                                                                                                        |             |          |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D001                                                                                                                                                                                                                         |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                            |             |          |                |                         |              |                     |
| 9296219H                                                                                                                                                                                                                                                         | H           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> ONE-TIME WASTE. Metals spiking solutions from MACT trial burn. This waste codeshould be inactivated by 06/30/2004.; One time Shipment.                                                                                        |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 219 Other organic liquids                                                                                                                                                                                                                |             |          |                |                         |              |                     |
| <b>EPA Form Code:</b> W219 Other organic liquid                                                                                                                                                                                                                  |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                               |             |          |                |                         |              |                     |
| <b>Source Code:</b> G11 Discarding off-specification or out-of-date chemicals or products                                                                                                                                                                        |             |          |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                         |             |          |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC9296                                                                                                                                                                                                                        |             |          |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D007                                                                                                                                                                                                                         |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                            |             |          |                |                         |              |                     |
| 9444202H                                                                                                                                                                                                                                                         | H           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> ONE-TIME WASTE. Freon 113 was used to heat carbon tetrachloride in the chlorine vaporizor. The Freon was removed from the vaporizor. Waste to be considered inactive on 07/31/1999.Waste inactivated due to source reduction. |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 202 Halogenated (e.g., chlorinated) solvent                                                                                                                                                                                              |             |          |                |                         |              |                     |
| <b>EPA Form Code:</b> W202 Concentrated halogenated (e.g., chlorinated) solvent                                                                                                                                                                                  |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal                                                                                                                                                                   |             |          |                |                         |              |                     |
| <b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing                                                                                                                                                                                                    |             |          |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0444                                                                                                                                                                                                                        |             |          |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> F002                                                                                                                                                                                                                         |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                            |             |          |                |                         |              |                     |
| 94453192                                                                                                                                                                                                                                                         | 2           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Ion Exchange Resin for the deionization of water. (ONE-TIME WASTE). To beinactivated as of 12/31/2000. Waste inactivated due to one-time shipment.                                                                            |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                                         |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                               |             |          |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC9445                                                                                                                                                                                                                        |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                            |             |          |                |                         |              |                     |

\*\*\* TEXAS COMMISSION ON ENVIRONMENTAL QUALITY \*\*\*  
Notice of Registration  
Industrial and Hazardous Waste

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                                    | Waste Class | Status   | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|----------------|-------------------------|--------------|---------------------|
| *** No Longer Generated Wastes ***                                                                                                                                                                                                                  |             |          |                |                         |              |                     |
| 94462191                                                                                                                                                                                                                                            | 1           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> ONE TIME WASTE.. Oil based drilling fluid generated during the drilling offoundation piers at the Cogeneration facility. Consider this waste inactive as of 2/28/01. Waste inactivated due to one-time shipment. |             |          |                |                         |              |                     |
| Texas Form Code: 219 Other organic liquids                                                                                                                                                                                                          |             |          |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                                                                                                                         |             |          |                |                         |              |                     |
| Company's Internal Code(s): 94462191                                                                                                                                                                                                                |             |          |                |                         |              |                     |
| Current Management Units: None                                                                                                                                                                                                                      |             |          |                |                         |              |                     |
| 94473191                                                                                                                                                                                                                                            | 1           | Inactive | 08/13/2025     | No                      | No           | No                  |
| <b>Description from Generator:</b> One-time shipment. Spent sodium bisulfite that has solidified. Waste should be considered inactive on 03/31/2012.; One time shipment.                                                                            |             |          |                |                         |              |                     |
| Texas Form Code: 319 Other waste inorganic solids                                                                                                                                                                                                   |             |          |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                                                                                                                         |             |          |                |                         |              |                     |
| Company's Internal Code(s): 94473191                                                                                                                                                                                                                |             |          |                |                         |              |                     |
| Current Management Units: None                                                                                                                                                                                                                      |             |          |                |                         |              |                     |
| 9448203H                                                                                                                                                                                                                                            | H           | Inactive | 08/13/2025     | No                      | No           | No                  |
| <b>Description from Generator:</b> ONE-TIME WASTE Waste solvent containing naphthalene and 2-methylnaphthalene. Waste should be considered inactive on 12/31/12.; One time shipment.                                                                |             |          |                |                         |              |                     |
| Texas Form Code: 203 Non-halogenated solvent                                                                                                                                                                                                        |             |          |                |                         |              |                     |
| EPA Form Code: W203 Concentrated non-halogenated (e.g., non-chlorinated) solvent                                                                                                                                                                    |             |          |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                                                                                                                         |             |          |                |                         |              |                     |
| Source Code: G01 Dip, flush or spray rinsing                                                                                                                                                                                                        |             |          |                |                         |              |                     |
| NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                   |             |          |                |                         |              |                     |
| Company's Internal Code(s): CC9448                                                                                                                                                                                                                  |             |          |                |                         |              |                     |
| EPA Hazardous Waste Numbers: D001                                                                                                                                                                                                                   |             |          |                |                         |              |                     |
| Current Management Units: None                                                                                                                                                                                                                      |             |          |                |                         |              |                     |
| 9449319H                                                                                                                                                                                                                                            | H           | Inactive | 08/13/2025     | No                      | No           | No                  |
| <b>Description from Generator:</b> ONE-TIME WASTE. Contaminated Rockbox Residue generated during cleanup of spill of VCM Trench Solids. Waste should be considered inactive on 07/31/13.; One time shipment.                                        |             |          |                |                         |              |                     |
| Texas Form Code: 319 Other waste inorganic solids                                                                                                                                                                                                   |             |          |                |                         |              |                     |
| EPA Form Code: W319 Other inorganic solids                                                                                                                                                                                                          |             |          |                |                         |              |                     |
| Origin Code: 2 Result of spill clean-up, equipment decommissioning or emergency removal                                                                                                                                                             |             |          |                |                         |              |                     |
| Source Code: G32 Cleanup of spill residues                                                                                                                                                                                                          |             |          |                |                         |              |                     |
| NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                   |             |          |                |                         |              |                     |
| Company's Internal Code(s): CC9449                                                                                                                                                                                                                  |             |          |                |                         |              |                     |
| EPA Hazardous Waste Numbers: F001                                                                                                                                                                                                                   |             |          |                |                         |              |                     |
| Current Management Units: None                                                                                                                                                                                                                      |             |          |                |                         |              |                     |
| F003 F005 F025 K019 K020                                                                                                                                                                                                                            |             |          |                |                         |              |                     |

As of 08/13/2025, The next unassigned sequence number for WASTES is 9451





38280

| Unit Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Unit Type                        | Unit Status | Date of Status | Classes of Waste Managed in Unit Onsite / Offsite | Unit Permit Number | Unit # on Permit | Regulatory Status                                | Deed Recording Needed/Date |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------|----------------|---------------------------------------------------|--------------------|------------------|--------------------------------------------------|----------------------------|
| 014                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Tank (surface)                   | INACTIVE    | 07/19/2012     | 2 / NA                                            | NA                 | NA               | 05 Non-Hazardous Regulated                       | YES /                      |
| <b>Description from Company:</b> Brine sludge filtration facility Cap: 86 gpm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| <b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| <b>Wastes Previously Managed at Unit:</b> 04023062                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| 015                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Sump                             | INACTIVE    | 07/09/2004     | 1 / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Description from Company:</b> 104 tank farm sump                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| <b>Wastes Currently Managed at Unit:</b> 01501021 Wastewater from organic process units and facility stormwater collected in sumpsand/or dikes. The water is steam stripped to recover organics. The tails fromthe steam strippers become                                                                                                                                                                                                                                                                                                                                                                                                    |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| 016                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Sump                             | INACTIVE    | 07/09/2004     | 1 / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Description from Company:</b> 105 tank farm sump                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| <b>Wastes Currently Managed at Unit:</b> 01501021 Wastewater from organic process units and facility stormwater collected in sumpsand/or dikes. The water is steam stripped to recover organics. The tails fromthe steam strippers become                                                                                                                                                                                                                                                                                                                                                                                                    |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| 017                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Tank (surface)                   | ACTIVE      |                | 1 / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Description from Company:</b> EDC Storm Water is managed at the VCM Wastewater Treatment Unit; EDC unit stormwater collection tank (capacity - 500,000 gal); EDC Wastewater Unit Primary Clarification Tank (capacity - 20,900 gal); EDC Wastewater Unit Primary Clarification Pump Tank (capacity = 560 gal); EDC Wastewater Unit Equalization Tank (capacity - 201,500 gal); Biological Treatment Unit (capacity = 162,400 gal); EDC Wastewater unit - Secondary Clarification Tank (capacity - 20,900 gal); EDC Wastewater Unit - Secondary Clarifier surge Tank (capacity - 560 gal); EDC Wastewater Unit Sandfilter (capacity - 4,00 |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| <b>System Types:</b> H081 Biological treatment with or without precipitation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| <b>Wastes Currently Managed at Unit:</b> 01501021 Wastewater from organic process units and facility stormwater collected in sumpsand/or dikes. The water is steam stripped to recover organics. The tails fromthe steam strippers become                                                                                                                                                                                                                                                                                                                                                                                                    |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| 018                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Tank (surface)                   | INACTIVE    | 12/20/1995     | NA / NA                                           | NA                 | NA               | 10 RCRA Permit exempt - Other                    | YES /                      |
| <b>Description from Company:</b> EDC wastewater filter press unit Cap: 50 gpm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| 019                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Miscellaneous storage containers | INACTIVE    | 12/20/1995     | 2 / NA                                            | NA                 | NA               | 10 RCRA Permit exempt - Other                    | YES /                      |
| <b>Description from Company:</b> EDC wastewater unit sludge dumpster storage area Cap: 30 yards                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| <b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| <b>Wastes Previously Managed at Unit:</b> 02274912                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| 020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Tank (surface)                   | INACTIVE    | 12/20/1995     | NA / NA                                           | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Description from Company:</b> EDC unit stormwater & process water collection tank                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| 021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Miscellaneous storage containers | INACTIVE    | 12/20/1995     | NA / NA                                           | NA                 | NA               | 10 RCRA Permit exempt - Other                    | YES /                      |
| <b>Description from Company:</b> Cell renewal dumpster storage area Cap: 60 yards                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                  |             |                |                                                   |                    |                  |                                                  |                            |

\*\*\* TEXAS COMMISSION ON ENVIRONMENTAL QUALITY \*\*\*  
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Industrial and Hazardous Waste

| 38280       | OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT |             |                |                                  |                    |                  |                   |                            |  |  |
|-------------|---------------------------------------------|-------------|----------------|----------------------------------|--------------------|------------------|-------------------|----------------------------|--|--|
| Unit Number | Unit Type                                   | Unit Status | Date of Status | Classes of Waste Managed in Unit | Unit Permit Number | Unit # on Permit | Regulatory Status | Deed Recording Needed/Date |  |  |
|             |                                             |             |                | Onsite / Offsite                 |                    |                  |                   |                            |  |  |

\*\*\* TEXAS COMMISSION ON ENVIRONMENTAL QUALITY \*\*\*  
Notice of Registration  
Industrial and Hazardous Waste

OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

38280

| Unit Number | Unit Type | Unit Status | Date of Status | Classes of Waste Managed in Unit<br>Onsite / Offsite | Unit Permit Number | Unit # on Permit | Regulatory Status | Deed Recording Needed/Date |
|-------------|-----------|-------------|----------------|------------------------------------------------------|--------------------|------------------|-------------------|----------------------------|
|-------------|-----------|-------------|----------------|------------------------------------------------------|--------------------|------------------|-------------------|----------------------------|

|     |                        |        |            |        |     |    |                        |       |
|-----|------------------------|--------|------------|--------|-----|----|------------------------|-------|
| 022 | Container storage area | ACTIVE | 08/22/1990 | 1 / NA | 005 | NA | 01 RCRA permitted unit | YES / |
|-----|------------------------|--------|------------|--------|-----|----|------------------------|-------|

Description from Company:

VCM CSA / Container Storage Area, 41-ft by 21-ft paved and curbed foundation covered by a roof and surrounded by 4 walls. Waste drum storage area I.

System Types:

Wastes Currently Managed at Unit:

H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.

0016202H Oxy Vinyls La Porte Chlorinated By-product

0106489H Clean up of fuel / lubrication oil spills, leaks, and drips

0108407H Solvent contaminated material generated from maintenance activities.

0117211H Spent paint thinner is generated during plant maintenance activities. Initial generation is estimated in 1988.

0121319H Broken lamps generated during replacement and maintenance of lights.

0133409H Paint-related material generated when paint or paint thinner dries in pails; 1988

0135117H Waste Mercury from clean-up of mercury spills and disposal of mercury-containing equipment.

0136206H Waste oil generated during maintenance of pumps or other oil containing equipment.

0138219H Unused resin material used for fiberglass work.

0139219H Unused sealant/adhesive that was not used during maintenance activities that is no longer needed, or out of spec.

0140209H Unused varnish used as coating on insulation work.

0177205H Fuel oil contaminated water from flushing out process lines orequipment.

0180309H Battery changeout

0190404H spent carbon canisters from aerosol can puncturing devices

0192204H Residue from spray cans that have been punctured.

0196409H WASTE RESIN GENERATED DURING MAINTENANCE ACTIVITIES

0202211H Waste Gasoline

0203211H Spill of curing agent.

0226319H Heavy Ends tank cleaning residue combined with reboiler / exchanger scale.

0229407H Reboiler scale produced when carbon builds up on the walls of the reboiler tubes.

0238319H Ethylene dichloride (EDC) contaminated material generated during production & maintenance operations.

0241301H Solvent contaminated media (typically soil) is generated during spill clean-up and/or general plant cleanup in the EDC/VCM units.

0242303H Incinerator firebox solids from VCM Incinerators F-550 AND F-570.

0243319H Incinerator brick generated when VCM unit incinerators are cleaned out or rebricked.

0244407H VCM Furnace Coke - carbon residue; 12/91

0246393H spent copper chloride catalyst generatedduring periodic reactor clean-outs,plastic, trash, ppe may be included.

0247319H VCM process area contaminated trench material/sludge

0248219H VCM unit heavy ends are generating during the purification of EDC in the process. The waste is typically piped to the hazardous waste feed tanks and then piped to one of the two on-site

0249310H Filters contaminated with vinyl chloride monomer, ethylene dichloride, and heavyand light ends; 12/91

0250404H Spent carbon contaminated with vinyl chloride

0258219H Mother Liquor from direct chlorination reactor in the VCM unit.

0260310H Absorbent material, plastic and personal protective equipment ; 10/93

0261319H Mother Liquor Contaminated Solids. Waste is generated during cleanout of the Mother Liquor (EDC) tank. Waste consists of iron (ferric chloride) contaminated with EDC.

0273319H Spent molecular sieve form OHC dryer generated when it becomes spent and is replaced.

0289303H Scale from incinerator flue gas caustic wash train. Initial date of generation was 9/19/1996.

0295319H Spiking solution contaminated solids.

0298393H Spent Catalytic Oxidizer catalyst generated at the VCM Incinerators F-550 and F-570.

0301301H By-Prod contaminated materials includingdirt, rock, cement and debris

0406609H Chlorinated resin which comes off the walls of the fiberglass piping and vessels in the chlorine drying area.

0471319H Chlorine process piping and solids are generated during maintenance activities when solids and/or piping are removed from the process

0504219H Natural gas used within the Cogen plant has liquids entrained in the gas. Filter/Separators are installed to prevent the liquid from entering the combustion section of the gas turbine.

0601201H Methanol & Water

0603003H Ethylene Lab Pygas

0604388H Glass vials, wipes, and plastic used for sampling py gas and wipe down after testing is complete.

06053041 Ash, Thermal Residue, Coke Fines that was swept or vacuumed from the SCR furnace 4150 when plugged.

0607319H Trash filtered from plant trenches that gets strained before discharging into the contaminated water storage tank.

0609393H The Cornetech catalyst became spent over time as a result of converting the NOx generated in the furnace flue gas into Nitrogen and air over the course of 2 to 3 years.



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| Unit Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Unit Type                | Unit Status | Date of Status | Classes of Waste Managed in Unit Onsite / Offsite | Unit Permit Number | Unit on Permit | Regulatory Status                                | Deed Recording Needed/Date |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------|----------------|---------------------------------------------------|--------------------|----------------|--------------------------------------------------|----------------------------|
| <b>Wastes Currently Managed at Unit:</b><br>0613319H Water and contaminants that filtered from the plant rain water trenches, water and oil from the water draw off from the gasoline and oil tanks and process water from the Saturator 0615206H New unused wash oil that was recovered while off loading into the wash oil tank.<br>0635319H Coke fines that filtered through G-4210 A/B strainer and were removed to remove pluggage.The waste generated is NORM positive.<br>0641319H PPE that was used to remove coke fines that filtered through G-4210 A/B strainer and were removed to remove pluggage.<br>0702310I Spent Filters from Ethylene Pipeline |                          |             |                |                                                   |                    |                |                                                  |                            |
| <b>Wastes Previously Managed at Unit:</b><br>0107310I 0118409I 01323192 0141210I 0142319I 0176489I 0179206I 01833102 0184310I 01853192 0186319I 01873192 0191489I<br>01933192 01943192 01953192 0199404H 0245393I 02523192 0265404H 0267407H 02704042 02713192 02723192 0296211I 0339219H<br>0401390I 0408319I 0415319I 0420319I 0424310H 0460319H 0479105H 0482202H 0483202H 0499319H 05033192 91083022 9138219H<br>9156409I 91723192 9195319I 9197319H 9296219H 9444202H 94453192                                                                                                                                                                              |                          |             |                |                                                   |                    |                |                                                  |                            |
| 023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Tank (surface)           | ACTIVE      | 10/05/1990     | H / NA                                            | 006                | NA             | 01 RCRA permitted unit                           | YES /                      |
| <b>Description from Company:</b><br>C-720A / Tank, evaluated steel sphere, Demeter of 26-ft, feed tank for the incinerators. Previous note: EDC & VCM Heavy & Light End Storage, opened 10/90 "Tank C-720A"<br>H040 Incineration - thermal destruction other than use as a fuel                                                                                                                                                                                                                                                                                                                                                                                  |                          |             |                |                                                   |                    |                |                                                  |                            |
| <b>System Types:</b><br>0016202H Oxy Vinyls La Porte Chlorinated By-product                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |             |                |                                                   |                    |                |                                                  |                            |
| <b>Wastes Currently Managed at Unit:</b><br>0248219H VCM unit heavy ends are generating during the purification of EDC in the process. The waste is typically piped to the hazardous waste feed tanks and then piped to one of the two on-site                                                                                                                                                                                                                                                                                                                                                                                                                   |                          |             |                |                                                   |                    |                |                                                  |                            |
| <b>Wastes Previously Managed at Unit:</b><br>0251219H VCM Light Ends are generated at the VCM Unit during the purification process. Estimated initial generation date 4Q91.<br>0339219H                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          |             |                |                                                   |                    |                |                                                  |                            |
| 024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Waste Treatment Facility | INACTIVE    | 12/20/1995     | H / NA                                            | NA                 | NA             | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Description from Company:</b><br>Biological Treatment Unit<br>0228491H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                          |             |                |                                                   |                    |                |                                                  |                            |
| 025                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Tank (surface)           | INACTIVE    | 12/20/1995     | NA / NA                                           | NA                 | NA             | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Description from Company:</b><br>8700 Gal. D501 Stormwater Collection Tank                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |             |                |                                                   |                    |                |                                                  |                            |
| 026                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Tank (surface)           | INACTIVE    | 12/20/1995     | NA / NA                                           | NA                 | NA             | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Description from Company:</b><br>EDC WASTEWATER UNIT - SECONDARY CLARIFICATION TANK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                          |             |                |                                                   |                    |                |                                                  |                            |
| 027                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Tank (surface)           | INACTIVE    | 12/20/1995     | NA / NA                                           | NA                 | NA             | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Description from Company:</b><br>EDC WASTEWATER UNIT AEROBIC DIGESTER TANK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |             |                |                                                   |                    |                |                                                  |                            |
| 028                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Tank (surface)           | INACTIVE    | 12/20/1995     | NA / NA                                           | NA                 | NA             | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Description from Company:</b><br>EDC WASTEWATER UNIT SECONDARY CLARIFIER SURGE TANK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                          |             |                |                                                   |                    |                |                                                  |                            |
| 029                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Tank (surface)           | INACTIVE    | 12/20/1995     | NA / NA                                           | NA                 | NA             | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Description from Company:</b><br>EDC WASTEWATER UNIT SANDFILTER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                          |             |                |                                                   |                    |                |                                                  |                            |



## Industrial and Hazardous Waste

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| Unit Number                               | Unit Type                        | Description from Company:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Unit Status | Date of Status | Classes of Waste Managed in Unit Onsite / Offsite | Unit Permit Number | Unit # on Permit | Regulatory Status                                | Deed Recording Needed/Date |
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| 035                                       | Miscellaneous storage containers | Cell renewal dumpster sto<br>H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br>01073101 Clean up of oil and fuel spills. Estimated initial date of generation 1988.<br>01513071 Rust/scale that is removed from decontaminated process equipment<br>01863191 Drained, oil-containing equipment removed from service. Oil is drained from equipment.<br>01933192 uncontaminated fire brick material from periodic maintenance or turnaroundactivities<br>01943192 Uncontaminated plastic packing removed during periodic maintenance orturnaround activities<br>01953192 Uncontaminated fiberglass plastic (FRP) material generated from maintenanceor turnaround activities<br>0197488H CONTAMINATED COOLING TOWER WOOD GENERATED FROM REPAIRS TO PLANTCOOLING TOWERS<br>01983192 Ceramic packing removed during periodic maintenance or turnaround activities.<br>02003192 waste fireproofing material<br>02543061 Limestone sludge is generated during neutralization of HCl generated during incineration of chlorinated organics. The m<br>02563191 Rockbox residue generated during lean-out and other maintenance activities required at limestone neutralization equipmen<br>02573062 Limestone sludge is generated during neutralization of Hcl generated during incineration of chlorinated organics<br>02593192 Rockbox residue generated during clean out and other maintenance activities required at limestone neutralization equipment.<br>0267407H Incinerator Absorber Solids are generated during maintenance or clean-out of incinerator acid absorber system.<br>0292404H Spent activated carbon used to remove organics from EDC/VCM wastewater.<br>0294319H Sandfilter Sand<br>04023062 Brine Sludge is generated when impurities are removed from "solution-mined" brine. Calcium and magnesium impurities are precipitated from the brine by adding sodium carbonate to the<br>04033111 Asbestos and asbestos contaminated material<br>04104092 Clean-out of Brine Ponds to facilitate inspection of pond liner. Solids/dirt sediment removed from bottom of pond.<br>0411319H Chlorine butter contaminated solids. Waste is generated when equipment/PPE/debris becomes contaminated with chlorinated resin that is formed on the walls of fiberglass piping and<br>04153191 Alkaline contaminated solids are generated during intermittent maintenance activities (pig-out caustic transfer line, caustic filter replacements) and/or caustic spills. Estimated initial<br>04163192 Class 2 alkaline contaminated solids are generated during intermittent maintenance activities and/or caustic spills.<br>04203191 Acid contaminated solids generated from a maintenance activity and or spill clean up.<br>04703191 Chlorine process piping and solids are generated during maintenance activities when solids and/or piping are removed from the process.<br>0471319H Chlorine process piping and solids are generated during maintenance activities when solids and/or piping are removed from the process<br>0494110H Organic contaminated cell renewal wastewater.<br>0450110H 0460319H | ACTIVE      | 04/22/1992     | 1 / NA                                            | NA                 | NA               | 10 RCRA Permit exempt - Other                    | YES /                      |
| <b>Wastes Previously Managed at Unit:</b> |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |                |                                                   |                    |                  |                                                  |                            |
| 036                                       | Tank (surface)                   | D501 STORM WATER COLLECTION TANK<br>01501021 Wastewater from organic process units and facility stormwater collected in sumpsand/or dikes. The water is steam stripped to recover organics. The tails fromthe steam strippers become                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ACTIVE      | 04/22/1992     | 1 / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Wastes Currently Managed at Unit:</b>  |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |                |                                                   |                    |                  |                                                  |                            |
| 037                                       | Tank (surface)                   | D502 STORM WATER COLLECTION TANK<br>01501021 Wastewater from organic process units and facility stormwater collected in sumpsand/or dikes. The water is steam stripped to recover organics. The tails fromthe steam strippers become                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ACTIVE      | 04/22/1992     | 1 / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Wastes Previously Managed at Unit:</b> |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |                |                                                   |                    |                  |                                                  |                            |
| 038                                       | Tank (surface)                   | D503 STORM WATER COLLECTION TANK<br>01501021 Wastewater from organic process units and facility stormwater collected in sumpsand/or dikes. The water is steam stripped to recover organics. The tails fromthe steam strippers become                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ACTIVE      | 04/22/1992     | 1 / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Wastes Currently Managed at Unit:</b>  |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |                |                                                   |                    |                  |                                                  |                            |







OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

38280

| Unit Number | Unit Type      | Description from Company:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Unit Status | Date of Status | Classes of Waste Managed in Unit Onsite / Offsite | Unit Permit Number | Unit # on Permit | Regulatory Status                                | Deed Recording Needed/Date |
|-------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------|---------------------------------------------------|--------------------|------------------|--------------------------------------------------|----------------------------|
| 060         | Tank (surface) | D533B EFFLUENT CLARIFIER SCUM TANK<br>Wastes Currently Managed at Unit: 01501021 Wastewater from organic process units and facility stormwater collected in sumpsand/or dikes. The water is steam stripped to recover organics. The tails fromthe steam strippers become                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ACTIVE      | 04/22/1992     | 1 / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| 061         | Tank (surface) | D546 FILTER BACKWASH PUMP TANK<br>Wastes Currently Managed at Unit: 01501021 Wastewater from organic process units and facility stormwater collected in sumpsand/or dikes. The water is steam stripped to recover organics. The tails fromthe steam strippers become                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ACTIVE      | 04/22/1992     | 1 / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| 062         | Sump           | Q541 BIOSLUDGE SUMP<br>Wastes Currently Managed at Unit: 01501021 Wastewater from organic process units and facility stormwater collected in sumpsand/or dikes. The water is steam stripped to recover organics. The tails fromthe steam strippers become                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ACTIVE      | 04/22/1992     | 1 / NA                                            | NA                 | NA               | 10 RCRA Permit exempt - Other                    | YES /                      |
| 063         | Sump           | 6555 INCINERATOR HCL SUMP<br>Wastes Currently Managed at Unit: 0293105H Hazardous wastewater at VCM; low pH water due to HCl in stream from incinerators.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ACTIVE      | 04/22/1992     | H / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| 064         | Sump           | G575 Incinerator HCl Sump<br>Wastes Currently Managed at Unit: 0293105H Hazardous wastewater at VCM; low pH water due to HCl in stream from incinerators.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ACTIVE      | 04/22/1992     | H / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| 065         | Incinerator    | CCIN-1 / Halogen acid furnace, horizontal flow, liquid hazardous waste industrial furnace consisting of a firebox (combustion zone) and waste heat boiler. Maximum capacity for hazardous waste feed 5500 pph.<br>H040 Incineration - thermal destruction other than use as a fuel<br>0016202H Oxy Vinyls La Porte Chlorinated By-product<br>0136206H Waste oil generated during maintenance of pumps or other oil containing equipment.<br>0248219H VCM unit heavy ends are generating during the purification of EDC in the process. The waste is typically piped to the hazardous waste feed tanks and then piped to one of the two on-site<br>0251219H VCM Light Ends are generated at the VCM Unit during the purification process. Estimated initial generation date 4Q91.<br>0293105H Hazardous wastewater at VCM; low pH water due to HCl in stream from incinerators.<br>0339219H EDC unit heavy ends are generated during the final distillation step. Typically, the EDC heavy ends from the EDC unit (T-18432) are provided to another plant as a feed stock and are not | ACTIVE      | 05/28/1993     | H / NA                                            | 001                | NA               | 01 RCRA permitted unit                           | YES /                      |
|             |                | Wastes Previously Managed at Unit: 0117211H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |                |                                                   |                    |                  |                                                  |                            |





Notice of Registration

Industrial and Hazardous Waste

OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| 38280 | Unit Number | Unit Type              | Description from Company:<br>System Types:<br>Wastes Currently Managed at Unit:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Unit Status | Date of Status | Classes of Waste Managed in Unit<br>Onsite / Offsite | Unit Permit Number | Unit # on Permit | Regulatory Status                                   | Deed Recording Needed/Date |
|-------|-------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------|------------------------------------------------------|--------------------|------------------|-----------------------------------------------------|----------------------------|
| 068   |             | Container storage area | Paved container storage area at VCM Heavy Ends Loading/Unloading.<br>H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br>02403191 VCM process area trench material (non-hazardous)<br>0241301H Solvent contaminated media (typically soil) is generated during spill clean-up and/or general plant cleanup in the EDC/VCM units.<br>02453931 Unused and spent copper chloride catalyst is generated during periodic catalystchange-outs. Miscellaneous items (plastic, trash, personal protective equipment) used during catalyst<br>0246393H spent copper chloride catalyst generatedduring periodic reactor clean-outs,plastic, trash, ppe may be included.<br>02523192 Wastewater stripper packing. Packing in wastewater trippers must be periodically replaced. Prior to maintenance activities, column (& packing) is decontaminated by steaming until<br>02543061 Limestone sludge is generated during neutralization of HCl generated during incineration of chlorinated organics. The m<br>0255319H Rockbox residue generated during clean-out and other maintenance activities required at limestone neutralization equipment (rockbox) in VCM unit. 10/93<br>02563191 Rockbox residue generated during lean-out and other maintenance activities required at limestone neutralization equipmen<br>0258219H Mother Liquor from direct chlorination reactor in the VCM unit.<br>02593192 Rockbox residue generated during clean out and other maintenance activities required at limestone neutralization equipment.<br>0268409H HE/LE Dike Liner is generated when spent liner is removed/repaired from secondary containment dike of Heavy Ends/Light Ends storage. Waste is listed due to the "mixture" and "deriva<br>02704042 Spent activated carbon drums generated during maintenance activities. Drums areused as back-up devices in vacuuming activities. Materials vacuumed are steamcleaned before vacuum<br>0294319H Sandfilter Sand<br>05023102 spent Natural Gas Filters | ACTIVE      | 05/28/1993     | 1 / NA                                               | NA                 | NA               | 13 RCRA Pmt Exempt -<br>Accumulation Time           | YES /                      |
| 069   |             | Sump                   | Hydroblast pad sump/filter located in VCM unit.<br>H120 Combination of chemical, biological, and/or physical treatment<br>0229407H Reboiler scale produced when carbon builds up on the walls of the reboiler tubes.<br>94473191                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ACTIVE      | 05/28/1993     | 1H / NA                                              | NA                 | NA               | 08 RCRA Permit exempt-waste<br>water treatment unit | YES /                      |
| 070   |             | Container storage area | Northwest section of 130<br>H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br>01884061 RCRA empty containers - drums, totes, etc. from industrial water treatment chemicals and oil.<br>0241301H Solvent contaminated media (typically soil) is generated during spill clean-up and/or general plant cleanup in the EDC/VCM units.<br>02962111 Waste polymer generated from wastewater treatment process.<br>04023062 Brine Sludge is generated when impurities are removed from "solution-mined" brine. Calcium and magnesium impurities are precipitated from the brine by adding sodium carbonate to the<br>0405403H Demister elements were replaced due to pluggage. In the chlorine cooling area there is a wet gas demister which contains (15) elements. These elements remove moisture and other<br>0406609H Chlorinated resin which comes off the walls of the fiberglass piping and vessels in the chlorine drying area.<br>04104092 Clean-out of Brine Ponds to facilitate inspection of pond liner. Solids/dirt sediment removed from bottom of pond.<br>04153191 Alkaline contaminated solids are generated during intermittent maintenance activities (pig-out caustic transfer line, caustic filter replacements) and/or caustic spills. Estimated initial<br>04203191 Acid contaminated solids generated from a maintenance activity and or spill clean up.<br>04903191 Ceramic saddles from the C/A units generated during maintenance activities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ACTIVE      | 05/28/1993     | 1 / NA                                               | NA                 | NA               | 13 RCRA Pmt Exempt -<br>Accumulation Time           | YES /                      |
|       |             |                        | Wastes Previously Managed at Unit:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                |                                                      |                    |                  |                                                     |                            |
|       |             |                        | 0199404H 0303404H 04083191 9157301H 94473191                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |             |                |                                                      |                    |                  |                                                     |                            |

## Date: 08/14/2025

OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

[illegible]



## Industrial and Hazardous Waste

38280

| Unit Number                                                                                                                                                                                                  | Unit Type                        | Unit Status | Date of Status | Classes of Waste Managed in Unit Onsite / Offsite | Unit Permit Number | Unit on Permit | Regulatory Status                      | Deed Recording Needed/Date |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------|----------------|---------------------------------------------------|--------------------|----------------|----------------------------------------|----------------------------|
| <b>Wastes Currently Managed at Unit:</b>                                                                                                                                                                     |                                  |             |                |                                                   |                    |                |                                        |                            |
| 04104092 Clean-out of Brine Ponds to facilitate inspection of pond liner. Solids/dirt sediment removed from bottom of pond.                                                                                  |                                  |             |                |                                                   |                    |                |                                        |                            |
| 04153191 Alkaline contaminated solids are generated during intermittent maintenance activities (pig-out caustic transfer line, caustic filter replacements) and/or caustic spills. Estimated initial         |                                  |             |                |                                                   |                    |                |                                        |                            |
| 04163192 Class 2 alkaline contaminated solids are generated during intermittent maintenance activities and/or caustic spills.                                                                                |                                  |             |                |                                                   |                    |                |                                        |                            |
| 04203191 Acid contaminated solids generated from a maintenance activity and or spill clean up.                                                                                                               |                                  |             |                |                                                   |                    |                |                                        |                            |
| 04774032 Fiberglass reinforced plastic (FRP) cell heads generated from the routine change-out of the cell heads on the chlorine diaphragm cells in the chlorine cell linearea. Initial date of generation on |                                  |             |                |                                                   |                    |                |                                        |                            |
| 04903191 Ceramic saddles from the C/A units generated during maintenance activities                                                                                                                          |                                  |             |                |                                                   |                    |                |                                        |                            |
| 04955192 Clean out of solids from C/A process ponds.                                                                                                                                                         |                                  |             |                |                                                   |                    |                |                                        |                            |
| 04961101 Organic contaminated cell renewal wastewater. Company Waste Description is CC0496.                                                                                                                  |                                  |             |                |                                                   |                    |                |                                        |                            |
| 05013192 Inlet air housing media from Co-gen unit. Water hardness is deposited on mediawhen water is evaporated.                                                                                             |                                  |             |                |                                                   |                    |                |                                        |                            |
| 05023102 spent Natural Gas Filters                                                                                                                                                                           |                                  |             |                |                                                   |                    |                |                                        |                            |
| 05033192 Ion Exchange Resin                                                                                                                                                                                  |                                  |             |                |                                                   |                    |                |                                        |                            |
| 05053071 Cogen HRSG tube residue                                                                                                                                                                             |                                  |             |                |                                                   |                    |                |                                        |                            |
| 06001131 Ethylene commissioning cleaning solution.                                                                                                                                                           |                                  |             |                |                                                   |                    |                |                                        |                            |
| 06023101 V-4240 Spent Filters and Coalescers                                                                                                                                                                 |                                  |             |                |                                                   |                    |                |                                        |                            |
| 06053041 Ash, Thermal Residue, Coke Fines that was swept or vacuumed from the SCR furnace 4150 when plugged.                                                                                                 |                                  |             |                |                                                   |                    |                |                                        |                            |
| 06223191 Prior to shutting unit down, caustic tanks are drained and flushed clean with boiler feed water.                                                                                                    |                                  |             |                |                                                   |                    |                |                                        |                            |
| 07003191 Pipeline Cleaning Debris                                                                                                                                                                            |                                  |             |                |                                                   |                    |                |                                        |                            |
| 07011011 Pipeline Flush Water                                                                                                                                                                                |                                  |             |                |                                                   |                    |                |                                        |                            |
| 07044041 Ethylene Activated Carbon                                                                                                                                                                           |                                  |             |                |                                                   |                    |                |                                        |                            |
| 08061191 Old unused product in unlabeled drums.                                                                                                                                                              |                                  |             |                |                                                   |                    |                |                                        |                            |
| 08074062 Cut up decontaminated totes.                                                                                                                                                                        |                                  |             |                |                                                   |                    |                |                                        |                            |
| 94501992 Brine/ Sodium Nitrite. Waste generated on 9/21/2017.                                                                                                                                                |                                  |             |                |                                                   |                    |                |                                        |                            |
| 00700011 01113902 0601201H 0603003H 0604388H                                                                                                                                                                 |                                  |             |                |                                                   |                    |                |                                        |                            |
| <b>Wastes Previously Managed at Unit:</b>                                                                                                                                                                    |                                  |             |                |                                                   |                    |                |                                        |                            |
| 073                                                                                                                                                                                                          | Container storage area           | ACTIVE      | 10/10/1994     | 1 / NA                                            | NA                 | NA             | 13 RCRA Pmt Exempt - Accumulation Time | YES /                      |
| <b>Description from Company:</b>                                                                                                                                                                             |                                  |             |                |                                                   |                    |                |                                        |                            |
| H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.                                                                                             |                                  |             |                |                                                   |                    |                |                                        |                            |
| <b>System Types:</b>                                                                                                                                                                                         |                                  |             |                |                                                   |                    |                |                                        |                            |
| <b>Wastes Currently Managed at Unit:</b>                                                                                                                                                                     |                                  |             |                |                                                   |                    |                |                                        |                            |
| 02374031 Steam Stripper Packing                                                                                                                                                                              |                                  |             |                |                                                   |                    |                |                                        |                            |
| 0238319H Ethylene dichloride (EDC) contaminated material generated during production & maintenance operations.                                                                                               |                                  |             |                |                                                   |                    |                |                                        |                            |
| 02403191 VCM process area trench material (non-hazardous)                                                                                                                                                    |                                  |             |                |                                                   |                    |                |                                        |                            |
| 02453931 Unused and spent copper chloride catalyst is generated during periodic catalystchange-outs. Miscellaneous items (plastic, trash, personal protective equipment) used during catalyst                |                                  |             |                |                                                   |                    |                |                                        |                            |
| 0246393H spent copper chloride catalyst generatedduring periodic reactor clean-outs,plastic, trash, ppe may be included.                                                                                     |                                  |             |                |                                                   |                    |                |                                        |                            |
| 0247319H VCM process area contaminated trench material/sludge                                                                                                                                                |                                  |             |                |                                                   |                    |                |                                        |                            |
| 0255319H Rockbox residue generated during clean-out and other maintenance activities required at limestone neutralization equipment (rockbox) in VCM unit. 10/93                                             |                                  |             |                |                                                   |                    |                |                                        |                            |
| 02563191 Rockbox residue generated during lean-out and other maintenance activities required at limestone neutralization equipment                                                                           |                                  |             |                |                                                   |                    |                |                                        |                            |
| 02593192 Rockbox residue generated during clean out and other maintenance activities required at limestone neutralization equipment.                                                                         |                                  |             |                |                                                   |                    |                |                                        |                            |
| 0275407H Dewatered sludge generated from the clean-out of the EDC stormwater tank locatedin the VCM plant. The sludge was generated on 09/30/94.                                                             |                                  |             |                |                                                   |                    |                |                                        |                            |
| 02903902 nonhaz. construction debris includes concrete, rebar, plywood, soil, plasticinsulation(non-asbestos),steel(pipe,etc)                                                                                |                                  |             |                |                                                   |                    |                |                                        |                            |
| 0292404H Spent activated carbon used to remove organics from EDC/VCM wastewater.                                                                                                                             |                                  |             |                |                                                   |                    |                |                                        |                            |
| 0294319H Sandfilter Sand                                                                                                                                                                                     |                                  |             |                |                                                   |                    |                |                                        |                            |
| 02863902                                                                                                                                                                                                     |                                  |             |                |                                                   |                    |                |                                        |                            |
| <b>Wastes Previously Managed at Unit:</b>                                                                                                                                                                    |                                  |             |                |                                                   |                    |                |                                        |                            |
| 074                                                                                                                                                                                                          | Miscellaneous storage containers | ACTIVE      | 12/20/1994     | 2 / NA                                            | NA                 | NA             | 05 Non-Hazardous Regulated             | YES /                      |
| <b>Description from Company:</b>                                                                                                                                                                             |                                  |             |                |                                                   |                    |                |                                        |                            |
| Medical Department Building storing Class 2 medical waste.                                                                                                                                                   |                                  |             |                |                                                   |                    |                |                                        |                            |
| <b>System Types:</b>                                                                                                                                                                                         |                                  |             |                |                                                   |                    |                |                                        |                            |
| <b>Wastes Currently Managed at Unit:</b>                                                                                                                                                                     |                                  |             |                |                                                   |                    |                |                                        |                            |
| H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.                                                                                             |                                  |             |                |                                                   |                    |                |                                        |                            |
| 01780092 Medical waste generated by daily activities at the Medical Department. Date ofinitial generation was 12/89.                                                                                         |                                  |             |                |                                                   |                    |                |                                        |                            |









## 38280

| Unit Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Unit Type                          | Unit Status | Date of Status | Classes of Waste Managed in Unit Onsite / Offsite | Unit Permit Number | Unit # on Permit | Regulatory Status                                | Deed Recording Needed/Date |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-------------|----------------|---------------------------------------------------|--------------------|------------------|--------------------------------------------------|----------------------------|
| 090                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Container storage area             | ACTIVE      | 01/19/2000     | 2 / NA                                            | NA                 | NA               | 05 Non-Hazardous Regulated                       | YES /                      |
| <b>Description from Company:</b> Container storage area for dewatered brine sludge (CCP) trailer.<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Currently Managed at Unit:</b> 04023062 Brine Sludge is generated when impurities are removed from "solution-mined" brine. Calcium and magnesium impurities are precipitated from the brine by adding sodium carbonate to the brine. |                                    |             |                |                                                   |                    |                  |                                                  |                            |
| 091                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Sump                               | ACTIVE      | 03/08/2000     | 1 / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Description from Company:</b> Co-Generation East Oil / Water Separator Sump<br><b>System Types:</b> H039 Other recovery or reclamation for reuse including acid regeneration, organics recovery, etc.<br><b>Wastes Currently Managed at Unit:</b> 01101141 Co-generation wastewater stream                                                                                                                                                                                                |                                    |             |                |                                                   |                    |                  |                                                  |                            |
| 092                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Sump                               | ACTIVE      | 03/08/2000     | 1 / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Description from Company:</b> Co-Generation West Oil / Water Separator Sump<br><b>System Types:</b> H039 Other recovery or reclamation for reuse including acid regeneration, organics recovery, etc.<br><b>Wastes Currently Managed at Unit:</b> 01101141 Co-generation wastewater stream                                                                                                                                                                                                |                                    |             |                |                                                   |                    |                  |                                                  |                            |
| 093                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Tank                               | ACTIVE      | 03/09/2000     | 1 / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Description from Company:</b> 56-D-001A Neutralization Tank at Co-gen<br><b>System Types:</b> H121 Neutralization only<br><b>Wastes Currently Managed at Unit:</b> 01101141 Co-generation wastewater stream                                                                                                                                                                                                                                                                               |                                    |             |                |                                                   |                    |                  |                                                  |                            |
| 094                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Tank                               | ACTIVE      | 03/09/2000     | 1 / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Description from Company:</b> 56-D-001B Neutralization Tank at Co-gen<br><b>System Types:</b> H121 Neutralization only<br><b>Wastes Currently Managed at Unit:</b> 01101141 Co-generation wastewater stream                                                                                                                                                                                                                                                                               |                                    |             |                |                                                   |                    |                  |                                                  |                            |
| 095                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Distillation/Solvent recovery unit | ACTIVE      | 10/30/2000     | H / NA                                            | NA                 | NA               | 10 RCRA Permit exempt - Other                    | YES /                      |
| <b>Description from Company:</b> Solvent still for the recovery of spent solvents<br><b>System Types:</b> H020 Solvents recovery<br><b>Wastes Currently Managed at Unit:</b> 0117211H Spent paint thinner is generated during plant maintenance activities. Initial generation is estimated in 1988.                                                                                                                                                                                         |                                    |             |                |                                                   |                    |                  |                                                  |                            |
| 096                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Container storage area             | INACTIVE    | 07/19/2012     | H / NA                                            | NA                 | NA               | 03 RCRA Permit Exempt<90 Day Storage             | YES /                      |
| <b>Description from Company:</b> Area east of Cl2 Recovery unit<br><b>System Types:</b> H120 Combination of chemical, biological, and/or physical treatment<br><b>Wastes Previously Managed at Unit:</b> 0498119H                                                                                                                                                                                                                                                                            |                                    |             |                |                                                   |                    |                  |                                                  |                            |

## Date: 08/14/2025

## 38280

| Unit Number                                                                                                                                                                                                                                                                                                                      | Unit Type                        | Unit Status | Date of Status | Classes of Waste Managed in Unit Onsite / Offsite | Unit Permit Number | Unit # on Permit | Regulatory Status                                | Deed Recording Needed/Date |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------|----------------|---------------------------------------------------|--------------------|------------------|--------------------------------------------------|----------------------------|
| 097                                                                                                                                                                                                                                                                                                                              | Miscellaneous storage containers | INACTIVE    | 07/19/2012     | H / NA                                            | NA                 | NA               | 03 RCRA Permit Exempt<90 Day Storage             | YES /                      |
| <b>Description from Company:</b> Concrete pad at chlorine recovery unit<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Previously Managed at Unit:</b> 9158404H                                                           |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| 098                                                                                                                                                                                                                                                                                                                              | Sump                             | ACTIVE      | 07/09/2004     | 1 / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Description from Company:</b> HCl Dock sump<br><b>System Types:</b> H135 Discharge to sewer/POTW or NPDES (with prior storage - with or without treatment)<br><b>Wastes Currently Managed at Unit:</b> 04001131 C/A wastewater from the chlorine-causticprocess areas and stormwater. Estimatedinitial generation 1988.       |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| 099                                                                                                                                                                                                                                                                                                                              | Sump                             | ACTIVE      | 07/09/2004     | 1 / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Description from Company:</b> PCE Dock sump<br><b>System Types:</b> H135 Discharge to sewer/POTW or NPDES (with prior storage - with or without treatment)<br><b>Wastes Currently Managed at Unit:</b> 04001131 C/A wastewater from the chlorine-causticprocess areas and stormwater. Estimatedinitial generation 1988.       |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| 100                                                                                                                                                                                                                                                                                                                              | Container storage area           | ACTIVE      | 06/10/2008     | H / NA                                            | NA                 | NA               | 13 RCRA Pmt Exempt - Accumulation Time           | YES /                      |
| <b>Description from Company:</b> Cell Renewal dip tank liquid waste<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Currently Managed at Unit:</b> 0497105H Spent Cell renewal dip tank solution                           |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| 101                                                                                                                                                                                                                                                                                                                              | Container storage area           | ACTIVE      | 01/05/2009     | 1 / NA                                            | NA                 | NA               | 05 Non-Hazardous Regulated                       | YES /                      |
| <b>Description from Company:</b> Roll-off storage area<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Currently Managed at Unit:</b> 01073101 Clean up of oil and fuel spills. Estimated initial date of generation 1988. |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| 102                                                                                                                                                                                                                                                                                                                              | Container storage area           | ACTIVE      | 10/11/2010     | NA / NA                                           | NA                 | NA               | 05 Non-Hazardous Regulated                       | YES /                      |
| <b>Description from Company:</b> Concrete area south of Plant 1 Cooling Tower.<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.                                                                                                          |                                  |             |                |                                                   |                    |                  |                                                  |                            |











## Industrial and Hazardous Waste

## 38280

| Unit Number | Unit Type                        | Description from Company:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Unit Status | Date of Status | Classes of Waste Managed in Unit Onsite / Offsite | Unit Permit Number | Unit # on Permit | Regulatory Status                    | Deed Recording Needed/Date |
|-------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------|---------------------------------------------------|--------------------|------------------|--------------------------------------|----------------------------|
| 115         | Container storage area           | <p>Concrete area West of C-2210 in VCM Plant 2</p> <p><b>System Types:</b><br/>H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.</p> <p><b>Wastes Currently Managed at Unit:</b><br/>02274912 Dewatered biological treatment sludge (biomass) is generated from wastewater treatment plants operated at this facility. (a) VCM Unit - initial generation 4091; generation rate is 0228491H Dewatered biological treatment sludge (biomass) is generated from the wastewater treatment plant operated at this facility. The stream is designated hazardous due to the derived from rule 02374031 Steam Stripper Packing<br/>02403191 VCM process area trench material (non-hazardous)<br/>02573062 Limestone sludge is generated during neutralization of Hcl generated during incineration of chlorinated organics<br/>02593192 Rockbox residue generated during clean out and other maintenance activities required at limestone neutralization equipment.<br/>0275407H Dewatered sludge generated from the clean-out of the EDC stormwater tank located in the VCM plant. The sludge was generated on 09/30/94.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ACTIVE      | 06/08/2015     | 1 / NA                                            | NA                 | NA               | 03 RCRA Permit Exempt<90 Day Storage | YES /                      |
| 116         | Container storage area           | <p>Waste Asbestos Container Storage Area North of Cell Renewal</p> <p><b>System Types:</b><br/>H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.</p> <p><b>Wastes Currently Managed at Unit:</b><br/>04033111 Asbestos and asbestos contaminated material</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ACTIVE      | 06/01/2016     | 1 / NA                                            | NA                 | NA               | 05 Non-Hazardous Regulated           | YES /                      |
| 117         | Drip pad                         | <p>Waste Asbestos Containment Pad Near Press</p> <p><b>System Types:</b><br/>H100 Physical treatment only (adsorption/absorption/separation/stripping/dewatering)</p> <p><b>Wastes Currently Managed at Unit:</b><br/>04001131 C/A wastewater from the chlorine-caustic process areas and stormwater. Estimated initial generation 1988.<br/>04033111 Asbestos and asbestos contaminated material</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ACTIVE      | 06/01/2016     | 1 / NA                                            | NA                 | NA               | 05 Non-Hazardous Regulated           | YES /                      |
| 118         | Miscellaneous storage containers | <p>Ethylene Furnace area; North, South, East, and West; concrete pad. This unit is managed as a less than 90 day unit.</p> <p><b>System Types:</b><br/>H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.</p> <p><b>Wastes Currently Managed at Unit:</b><br/>05033192 Ion Exchange Resin<br/>06023101 V-4240 Spent Filters and Coalescers<br/>06053041 Ash, Thermal Residue, Coke Fines that was swept or vacuumed from the SCR furnace 4150 when plugged.<br/>06063041 Waste Generated on November 6, 2018. Coke from inside Ethane Cracking Furnace collected during cleaning.<br/>0609393H The Cormetech catalyst became spent over time as a result of converting the NOx generated in the furnace flue gas into Nitrogen and air over the course of 2 to 3 years.<br/>0613319H Water and contaminants that filtered from the plant rain water trenches, water and oil from the water draw off from the gasoline and oil tanks and process water from the Saturator<br/>06143041 Coke from inside ethane cracking furnace coils that had spalled off and was collected in coke catcher during normal operations, and contains moisture.<br/>06233931 SCR removed from Ethylene and VCM furnaces during maintenance or clean-outs for repairs.<br/>06263192 The packing from C-4210 Ethane Feed Saturator was removed from equipment during maintenance/shutdown work and replaced. Equipment and packing were steamed cleaned prior to opening of<br/>06273192 The packing from C-4320 Deethanizer was removed from equipment during maintenance/shutdown work and replaced. Equipment and packing were steamed cleaned prior to opening of<br/>06383102 Filter socks used to screen process wastewater going into trenches to collect and filter debris and process waste.<br/>06401192 Water was generated during hydro blasting of equipment at the temporary hydro blast pad. The solids were vacuumed out of the sump and trenches around the hydro blast pad.<br/>0641319H PPE that was used to remove coke fines that filtered through G-4210 A/B strainer and were removed to remove pluggage.</p> | ACTIVE      | 12/05/2017     | 1 / NA                                            | NA                 | NA               | 03 RCRA Permit Exempt<90 Day Storage | YES /                      |





## Industrial and Hazardous Waste

38280

| Unit Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Unit Type                        | Unit Status | Date of Status | Classes of Waste Managed in Unit Onsite / Offsite | Unit Permit Number | Unit # on Permit | Regulatory Status                    | Deed Recording Needed/Date |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------|----------------|---------------------------------------------------|--------------------|------------------|--------------------------------------|----------------------------|
| 126                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Miscellaneous storage containers | ACTIVE      | 12/05/2017     | 2H / NA                                           | NA                 | NA               | 03 RCRA Permit Exempt<90 Day Storage | YES /                      |
| <b>Description from Company:</b> Ethy E-4360 Propylene Refrigerant Condenser area, east side, concrete pad<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Currently Managed at Unit:</b> 0601201H Methanol & Water<br>0631310H Filter socks used to screen process wastewater into trenches to collect and filter debris and process waste water.<br>06333102 Activated carbon used to screen process wastewater to purify the process wastewater.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                  |             |                |                                                   |                    |                  |                                      |                            |
| 127                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Container storage area           | ACTIVE      | 08/02/2018     | 2 / NA                                            | NA                 | NA               | 03 RCRA Permit Exempt<90 Day Storage | YES /                      |
| <b>Description from Company:</b> Spent Abrasive Media: Sandblasting Sand<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Currently Managed at Unit:</b> 01734902 Sandblasting sand used in daily maintenance activities throughout the plant. Initial date of generation was 06/87.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                  |             |                |                                                   |                    |                  |                                      |                            |
| 128                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Miscellaneous storage containers | ACTIVE      | 08/30/2018     | 1 / NA                                            | NA                 | NA               | 05 Non-Hazardous Regulated           | YES /                      |
| <b>Description from Company:</b> Used Oil, Used Antifreeze: CA Concrete Pad S. End of old boiler house.<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Currently Managed at Unit:</b> 01073101 Clean up of oil and fuel spills. Estimated initial date of generation 1988.<br>01372962 Waste Antifreeze<br>01764891 Soil generated from the clean-up of a diesel spill from plant machinery. Initial date of generation was 8/94.<br>01792061 Used oil generated from equipment oil change outs.<br>01843101 Used oil filters<br>0136206H 0177205H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                  |             |                |                                                   |                    |                  |                                      |                            |
| 129                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Waste pile                       | ACTIVE      | 04/05/2022     | 2 / NA                                            | NA                 | NA               | 05 Non-Hazardous Regulated           | YES /                      |
| <b>Description from Company:</b> Rockbox residue stockpile placed on concrete pad north of VCM 2 furnaces. Generated annually during Rockbox outages.<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Currently Managed at Unit:</b> 02593192 Rockbox residue generated during clean out and other maintenance activities required at limestone neutralization equipment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                  |             |                |                                                   |                    |                  |                                      |                            |
| 130                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Miscellaneous storage containers | ACTIVE      | 10/30/2023     | 12 / NA                                           | NA                 | NA               | 03 RCRA Permit Exempt<90 Day Storage | YES /                      |
| <b>Description from Company:</b> Area west of the multi point ground flare and east of 2nd street.<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Currently Managed at Unit:</b> 06023101 V-4240 Spent Filters and Coalescers<br>06243102 MOLSIVE/DENSTONE WAS USED IN C-4281 A&B DRYERS TO REMOVE RESIDUAL MOISTURE FROM ETHYLENE.<br>06253102 The molsive/denstone was used in C-4335 Ethylene Dryer to remove residual moisture from ethylene. Dryers were steamed cleaned prior to opening.<br>06263192 The packing from C-4210 Ethane Feed Saturator was removed from equipment during maintenance/shutdown work and replaced. Equipment and packing were steamed cleaned prior to opening of<br>06273192 The packing from C-4320 Deethanizer was removed from equipment during maintenance/shutdown work and replaced. Equipment and packing were steamed cleaned prior to opening of<br>06293192 The packing from C-4270 Caustic/Water Wash Tower was removed from equipment during maintenance/shutdown work and replaced. Equipment and packing were steamed cleaned prior to opening of<br>06303192 The packing from C-4452 was removed from equipment during maintenance/shutdown work and replaced. Equipment and packing were steamed cleaned prior to opening.<br>06333102 Activated carbon used to screen process wastewater to purify the process wastewater.<br>06343192 The packing from C-4220 Quench Tower was removed from equipment during maintenance/shutdown work and replaced. Equipment and packing were steamed cleaned prior to opening. |                                  |             |                |                                                   |                    |                  |                                      |                            |

OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

38280

| Unit Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Unit Type                        | Unit Status | Date of Status | Classes of Waste Managed in Unit Onsite / Offsite | Unit Permit Number | Unit # on Permit | Regulatory Status                    | Deed Recording Needed/Date |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------|----------------|---------------------------------------------------|--------------------|------------------|--------------------------------------|----------------------------|
| 131                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Miscellaneous storage containers | ACTIVE      | 10/30/2023     | 2H / NA                                           | NA                 | NA               | 03 RCRA Permit Exempt<90 Day Storage | YES /                      |
| <b>Description from Company:</b> Area east of cold box and west of 3.25 street.<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Currently Managed at Unit:</b> 0601201H Methanol & Water<br>06333102 Activated carbon used to screen process wastewater to purify the process wastewater.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                  |             |                |                                                   |                    |                  |                                      |                            |
| 132                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Miscellaneous storage containers | ACTIVE      | 10/30/2023     | 2 / NA                                            | NA                 | NA               | 03 RCRA Permit Exempt<90 Day Storage | YES /                      |
| <b>Description from Company:</b> Area next to C3/C4 truck loading.<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Currently Managed at Unit:</b> 06283192 Solids that were generated during hydro blasting and clean out of equipment that contained NORM. This includes secondary containment, rust, scale PPE and equipment (piping, nuts, 06333102 Activated carbon used to screen process wastewater to purify the process wastewater.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  |             |                |                                                   |                    |                  |                                      |                            |
| 133                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Miscellaneous storage containers | ACTIVE      | 10/30/2023     | 2 / NA                                            | NA                 | NA               | 03 RCRA Permit Exempt<90 Day Storage | YES /                      |
| <b>Description from Company:</b> Area southwest corner C3/C4 Truck loading.<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Currently Managed at Unit:</b> 06283192 Solids that were generated during hydro blasting and clean out of equipment that contained NORM. This includes secondary containment, rust, scale PPE and equipment (piping, nuts, 06323192 Solids were generated during hydro blasting of equipment at the temporary hydro blast pad that contained NORM.The solids were vacuumed out of the sump and trenches around the hydro 06333102 Activated carbon used to screen process wastewater to purify the process wastewater.<br>0635319H Coke fines that filtered through G-4210 A/B strainer and were removed to remove pluggage.The waste generated is NORM positive.<br>06363192 E-4211 saturator circulation heater A & B were removed from service to remove pluggage. The waste generated is NORM positive.<br>06373192 Solids from the E-4321 Deethanizer which was removed from service during maintenance/shutdown work.<br>06383102 Filter socks used to screen process wastewater going into trenches to collect and filter debris and process waste.<br>06401192 Water was generated during hydro blasting of equipment at the temporary hydro blast pad. The solids were vacuumed out of the sump and trenches around the hydro blast pad. |                                  |             |                |                                                   |                    |                  |                                      |                            |

**Appendix B**

**January 22, 2003 TCEQ Letter**

Robert J. Huston, *Chairman*  
R. B. "Ralph" Marquez, *Commissioner*  
Kathleen Hartnett White, *Commissioner*  
Margaret Hoffman, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

January 22, 2003

**RECEIVED**  
**JAN 27 2003**

Mr. David Harvey  
Occidental Chemical Corporation  
P.O. Box CC  
Ingleside, TX 78362-0710

Re: Cell Renewal Sump (RFI Unit No. 5) - Approval of No Further Action Request  
Occidental Chemical Corporation (OxyChem) - Ingleside Plant  
TCEQ Solid Waste Registration No. 38280  
TCEQ Hazardous Waste Permit No. HW-50322  
EPA ID No. TXD982286932

Dear Mr. Harvey:

The Texas Commission on Environmental Quality (TCEQ) has reviewed the inspection report for the Cell Renewal Sump, submitted on October 15, 2002. The inspection was proposed as a follow up to various RCRA Facility Investigations (RFIs) at the unit, as discussed in a September 30, 1999 OxyChem submittal and a November 16, 1999 commission response.

Based on our review of information available to date for the Cell Renewal Sump, it appears that there have not been releases from this unit. Therefore, the TCEQ approves the no further action request.

Additionally, based on our file review, OxyChem has completed the RFI requirements for all eighteen (18) units listed in Section IX.A of the hazardous waste permit. To update the status of these units in the permit, OxyChem will need to submit a permit modification application. Also, as a reminder, if OxyChem identifies new solid waste management units or discovers releases of hazardous waste or hazardous constituents, notification and appropriate actions must be taken as required by Permit Section V.I and regulations in effect at the time of discovery.

Please be aware that it is the continuing obligation of OxyChem to ensure that municipal hazardous waste and industrial solid waste are managed in a manner which does not cause the discharge or imminent threat of discharge of waste into or adjacent to waters in the state, a nuisance, or the endangerment of public health and welfare, as required by 30 Texas Administrative Code §335.4. The burden remains upon OxyChem to take any necessary and authorized action to correct such conditions if and when they occur.

If you have any questions concerning this letter, please contact me at (512) 239-2130, or at Mail Code MC-127 at the letterhead address.

Sincerely,

A handwritten signature in blue ink, appearing to read "Lila Beckley".

Lila Beckley, CA Program Manager  
Corrective Action Section  
Remediation Division

cc: Waste Program Manager, TCEQ Region 14 Office, Corpus Christi

## **Appendix C**

### **Preliminary Review Facility Checklist**



**Preliminary Review Facility Checklist**

|              |                                 |           |           |
|--------------|---------------------------------|-----------|-----------|
| Facility:    | Occidental Chemical Corporation | City      | Ingleside |
| ISW Reg. No: | 38280                           | Date      |           |
| Permit No.   | 50322                           | Reviewer: |           |
| EPA ID No.   | TXD 982 286 932                 |           |           |

**A. Waste Management Units:****RCRA Regulated Units:**

| NOR No. | Description                         | Status        |
|---------|-------------------------------------|---------------|
| 006     | Chlor-Alkali Container Storage Area | Closed (2019) |
| 022     | VCM Container Storage Area          | Active        |
| 023     | Tank C-720A                         | Active        |
| 048     | WW Sludge Container Storage Area    | Closed (2016) |
| 065     | Halogen Acid Furnace CCIN-1         | Active        |
| 066     | Halogen Acid Furnace CCIN-2         | Active        |
| 081     | Tank 6D-02                          | Closed (2015) |
| 082     | Tank C-720B                         | Active        |

**Solid Waste Management Units:**

| NOR No. | Description                                           | Status   |
|---------|-------------------------------------------------------|----------|
| 001     | Tank                                                  | Inactive |
| 002     | CSA - Chlorine Compressor Inlet Cooler Pad            | Inactive |
| 003     | Sump - Ship Dock Sump Tank                            | Active   |
| 004     | Waste Pile – South Area Construction Debris Area      | Inactive |
| 005     | Tank – Waste Drum Storage Area                        | Closed   |
| 007     | Surface Impoundment – Chlorine/Alkali Process WW      | Active   |
| 008     | Sump – Cell Renewal Sump                              | Active   |
| 009     | Sump – Brine Purification Blow-Down Sump              | Active   |
| 010     | Sump – Chlorine Drying Area Sump                      | Active   |
| 011     | Sump – Spent Acid Storage Area Sump                   | Active   |
| 012     | Sump – Chlorine/Alkali Process WW pH Adjustment Sumps | Active   |
| 013     | Sump – Oil Separation Sump                            | Active   |
| 014     | Tank – Brine Sludge Filtration Facility               | Inactive |

| NOR No. | Description                                                         | Status            |
|---------|---------------------------------------------------------------------|-------------------|
| 015     | Sump – 104 Tank Farm Sump                                           | Inactive          |
| 016     | Sump – 105 Tank Farm Sump                                           | Inactive          |
| 017     | Tank – EDC Storm Water                                              | Active            |
| 018     | Tank – EDC WW Filter Press Unit                                     | Inactive          |
| 019     | Misc. Storage Containers – EDC WW Unit Sludge Dumpster Storage Area | Inactive          |
| 020     | Tank – EDC Unit Storm Water and Process Water                       | Inactive          |
| 021     | Misc. Storage Containers – Cell Renewal Dumpster Storage Area       | Inactive          |
| 024     | Waste Treatment – Biological Treatment Unit                         | Inactive          |
| 025     | Tank – D501 Stormwater Collection Tank                              | Inactive          |
| 026     | Tank – EDC WW Secondary Clarification Tank                          | Inactive          |
| 027     | Tank – EDC WW Aerobic Digester Tank                                 | Inactive          |
| 028     | Tank – EDC WW Secondary Clarifier Surge Tank                        | Inactive          |
| 029     | Tank – EDC WW Sand Filter                                           | Inactive          |
| 030     | Tank – EDC WW Secondary pH Adjustment Tank                          | Inactive          |
| 031     | Tank – EDC WW Filter Press                                          | Closure Requested |
| 032     | Tank – EDC WW Filter Press Filtrate Tank                            | Active            |
| 033     | Misc. Storage Containers – North of EDC WW Belt Press Building      | Active            |
| 034     | Tank – EDC Stormwater and Process Water Collection                  | Inactive          |
| 035     | Misc. Storage Containers – Cell Renewal Dumpster Storage            | Active            |
| 036     | Tank – D501 Storm Water Collection Tank                             | Active            |
| 037     | Tank – D502 Storm Water Collection Tank                             | Active            |
| 038     | Tank – D502 Storm Water Collection Tank                             | Active            |
| 039     | Tank – D525 Storm Water Storage Tank A                              | Active            |
| 040     | Tank – D525 Storm Water Storage Tank B                              | Active            |
| 041     | Tank – D531 Equalization Tank                                       | Active            |
| 042     | Tank – D532 Biotreater                                              | Active            |
| 043     | Tank – Z531A Effluent Clarifier                                     | Active            |
| 044     | Tank – Z531B Effluent Clarifier                                     | Active            |
| 045     | Tank – 533A Media Filter                                            | Active            |
| 046     | Tank – Z533B Media Filter                                           | Active            |

| NOR No. | Description                                          | Status   |
|---------|------------------------------------------------------|----------|
| 047     | Tank – D535 Aerobic Digester                         | Active   |
| 049     | Tank – D544 Water Outfall Tank                       | Active   |
| 050     | Tank – D591 Limestone Neutralizer                    | Active   |
| 051     | Tank – D590A HCl Storage                             | Inactive |
| 052     | Tank – D590B HCl Storage                             | Inactive |
| 053     | Tank – D596 Limestone Neutralizer Primary pH Tank    | Active   |
| 054     | Tank – D597 Limestone Neutralizer Secondary pH Tank  | Active   |
| 055     | Tank – D598 Neutralizer Pump Tank                    | Active   |
| 056     | Tank – Z590 Limestone Neutralizer Clarifier          | Active   |
| 057     | Tank – D542 Belt Press Tank                          | Active   |
| 058     | Tank – D595 Neutralizer Clarifier Effluent Pump Tank | Active   |
| 059     | Tank – D534 Effluent Clarifier Pump Tank             | Active   |
| 060     | Tank – D533B Effluent Clarifier Scum Tank            | Active   |
| 061     | Tank – D546 Filter Backwash Pump Tank                | Active   |
| 062     | Sump – Q541 Biosludge Sump                           | Active   |
| 063     | Sump – 6555 Incinerator HCl Sump                     | Active   |
| 064     | Sump – G575 Incinerator HCl Sump                     | Active   |
| 067     | CSA – South of Hydroblast Pad in VCM Unit            | Active   |
| 068     | CSA – VCM Heavy Ends Loading/Unloading               | Active   |
| 069     | Sump – Hydroblast Pad Sump/Filter in VCM Unit        | Active   |
| 070     | CSA – Northwest Section of 130                       | Active   |
| 071     | Misc. Storage Containers - Plant Trash               | Active   |
| 072     | Misc. Storage Containers - Non-Hazardous Waste       | Active   |
| 073     | CSA – Oxyhydrochlorination Unit in VCM Plant         | Active   |
| 074     | Misc. Storage Containers – Medical Depart. Bldg.     | Active   |
| 075     | Tank – Tank D-03 for Heavy Ends from EDC Plant       | Closed   |
| 076     | CSA – Caustic Area                                   | Active   |
| 077     | Miscellaneous Storage Containers                     | Inactive |
| 078     | Misc. Storage Containers – East of Chlorine Park     | Active   |
| 079     | Misc. Storage Containers – East of Chlorine Park     | Inactive |
| 080     | Misc. Storage Containers – VCM Construction Site     | Active   |
| 083     | Misc. Storage Containers – Sand Blast Area           | Active   |
| 084     | CSA – North of VCM 2 Furnaces West to OHC 2          | Active   |

| NOR No. | Description                                           | Status   |
|---------|-------------------------------------------------------|----------|
| 085     | CSA – Container Storage Area                          | Active   |
| 086     | CSA – North of EDC WW Area                            | Active   |
| 087     | CSA – West of VCM Storage Spheres                     | Active   |
| 088     | CSA – Co-Gen Facility                                 | Inactive |
| 089     | CSA – Concrete Area Southeast of                      | Active   |
| 090     | CSA – Dewatered Brine Sludge (CCP) Trailer            | Active   |
| 091     | Sump – Co-Generation East Oil/Water Separator Sump    | Active   |
| 092     | Sump – Co-Generation West Oil/Water Separator Sump    | Active   |
| 093     | Tank – 56-D-001A Neutralization Tank at Co-Gen        | Active   |
| 094     | Tank – 56-D-001B Neutralization Tank at Co-Gen        | Active   |
| 095     | Distillation/Solvent Recovery Unit for Spent Solvents | Active   |
| 096     | CSA – East of Cl <sub>2</sub> Recovery Unit           | Inactive |
| 097     | Misc. Storage Containers – Chlorine Recovery Unit     | Inactive |
| 098     | Sump – HCl Dock Sump                                  | Active   |
| 099     | Sump – PCE Dock Sump                                  | Active   |
| 100     | CSA – Cell Renewal Dip Tank Liquid Waste              | Active   |
| 101     | CSA – Roll-Off Storage Area                           | Active   |
| 102     | CSA – South of Plant 1 Cooling Tower                  | Active   |
| 103     | CSA – SW of VCM Drum Storage Building – Unit 022      | Active   |
| 104     | CSA – South of Boiler House                           | Active   |
| 105     | CSA – East of Chlor-Alkali WW Ponds                   | Active   |
| 106     | CSA – South of VCM Storm Water Tanks (D-525A/B)       | Active   |
| 107     | CSA – East of D-531                                   | Active   |
| 108     | CSA – South of CVS                                    | Active   |
| 109     | CSA – Adjacent to 550/570 Incinerators                | Active   |
| 110     | CSA - Adjacent to Cogen CTGs and HRSGs                | Active   |
| 111     | CSA – Adjacent to Cogen Water Treatment Building      | Active   |
| 112     | CSA – Cogen Laydown/Maintenance Yard                  | Active   |
| 113     | CSA – Concrete Hydroblast Pad                         | Active   |
| 114     | CSA – West of EDC Storage Dike                        | Active   |
| 115     | CSA – West of C-2210 in VCM Plant 2                   | Active   |
| 116     | CSA – Waste Asbestos Area North of Cell Renewal       | Active   |
| 117     | Drip Pad – Waste Asbestos Containment Pad Near Press  | Active   |

| NOR No. | Description                                                                                    | Status   |
|---------|------------------------------------------------------------------------------------------------|----------|
| 118     | Misc. Storage Containers – Ethylene Furnace Area                                               | Active   |
| 119     | Misc. Storage Containers – Ethylene D-4642A BFW Area                                           | Active   |
| 120     | Misc. Storage Containers – Ethylene Area Between Furnaces and Thermal Oxidizers                | Active   |
| 121     | Misc. Storage Containers – Ethy V-4570 Thermal Oxidizer Area                                   | Active   |
| 122     | Misc. Storage Containers – Ethy C-4640 Condensate Flash Drum and E-4210 Ethane Feed Pre-Heater | Active   |
| 123     | Misc. Storage Containers – Ethy E-4341A/B Ethylene Fractionator Reboiler                       | Active   |
| 124     | Misc. Storage Containers – Ethy Tent #1 Area                                                   | Inactive |
| 125     | Misc. Storage Containers – Ethylene Tent #2 Area                                               | Active   |
| 126     | Misc. Storage Containers – Ethy E-4360 Propylene Refrigerant Condenser Area                    | Active   |
| 127     | CSA – Spent Abrasive Media Sandblasting Sand                                                   | Active   |
| 128     | Misc. Storage Containers – Used Oil/Used Antifreeze South End of Old Boiler House              | Active   |
| 129     | Waste Pile – Rockbox Residue Stockpile North of VCM 2 Furnaces                                 | Active   |
| 130     | Misc. Storage Containers – West of Multi-Point Ground Flare                                    | Active   |
| 131     | Misc. Storage Containers – East of Cold Box                                                    | Active   |
| 132     | Misc. Storage Containers – C3/C4 Truck Loading                                                 | Active   |
| 133     | Misc. Storage Containers – SW Corner of C3/C4 Truck Loading                                    | Active   |

## B. Reviewed Documents

## RCRA:

Part A ☒Part B ☒Permit ☒

## CERCLA:

Inspection Reports:

Enforcement Actions

|  |
|--|
|  |
|  |

Exposure Information

Other Information:

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|  |
|  |

C. Summary

All RCRA Facility Investigation obligations have been met pursuant to the January 22, 2003 letter from TCEQ. Therefore, no outstanding units or areas of concern identified.

D. Recommended Action:

No units or areas of concern are recommended for further investigation.

## **Appendix D**

### **Preliminary Review Unit Checklist**

**Preliminary Review Unit Checklist**

|              |                                 |          |           |
|--------------|---------------------------------|----------|-----------|
| Facility:    | Occidental Chemical Corporation | City     | Ingleside |
| ISW Reg. No: | 38280                           | Date     |           |
| Permit No.   | 50322                           | Reviewer |           |
| EPA ID No.   | TXD 982 286 932                 |          |           |

## Waste Management Unit(s):

|                               |                                                    |
|-------------------------------|----------------------------------------------------|
| A. NOR No.:                   | N/A. All RFI obligations met per 1/22/2003 Letter. |
| B. Description:               |                                                    |
| C. Dates of Operation:        |                                                    |
| Wastes Managed:               |                                                    |
| Pollutant Dispersal Pathways: |                                                    |
| Summary:                      |                                                    |
| Recommended Action:           |                                                    |
| A. NOR No.:                   |                                                    |
| B. Description:               |                                                    |
| C. Dates of Operation:        |                                                    |
| Wastes Managed:               |                                                    |
| Pollutant Dispersal Pathways: |                                                    |
| Summary:                      |                                                    |
| Recommended Action:           |                                                    |
| A. NOR No.:                   |                                                    |
| B. Description:               |                                                    |
| C. Dates of Operation:        |                                                    |
| Wastes Managed:               |                                                    |
| Pollutant Dispersal Pathways: |                                                    |
| Summary:                      |                                                    |
| Recommended Action:           |                                                    |
| A. NOR No.:                   |                                                    |
| B. Description:               |                                                    |
| C. Dates of Operation:        |                                                    |
| Wastes Managed:               |                                                    |
| Pollutant Dispersal Pathways: |                                                    |
| Summary:                      |                                                    |
| Recommended Action:           |                                                    |



|                               |  |
|-------------------------------|--|
| A. NOR No.:                   |  |
| B. Description:               |  |
| C. Dates of Operation:        |  |
| Wastes Managed:               |  |
| Pollutant Dispersal Pathways: |  |
| Summary:                      |  |
| Recommended Action:           |  |
| A. NOR No.:                   |  |
| B. Description:               |  |
| C. Dates of Operation:        |  |
| Wastes Managed:               |  |
| Pollutant Dispersal Pathways: |  |
| Summary:                      |  |
| Recommended Action:           |  |
| A. NOR No.:                   |  |
| B. Description:               |  |
| C. Dates of Operation:        |  |
| Wastes Managed:               |  |
| Pollutant Dispersal Pathways: |  |
| Summary:                      |  |
| Recommended Action:           |  |
| A. NOR No.:                   |  |
| B. Description:               |  |
| C. Dates of Operation:        |  |
| Wastes Managed:               |  |
| Pollutant Dispersal Pathways: |  |
| Summary:                      |  |
| Recommended Action:           |  |
| A. NOR No.:                   |  |
| B. Description:               |  |
| C. Dates of Operation:        |  |
| Wastes Managed:               |  |
| Pollutant Dispersal Pathways: |  |
| Summary:                      |  |
| Recommended Action:           |  |

## **Attachment X.**

### **Air Emission Standards**

| Component ID | Component Class | Area Description | Component Type  | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|-----------------|---------|----------------|----------|---------|------------|
| 25675        | CONECT          | 400 NESD         | FLANGE          | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14379        | VALVE           | 200 SESD         | GATE            | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14723        | CONECT          | 200 SWSD         |                 | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 28106        | VALVE           | 500 EAST         |                 | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31580        | CONECT          | 700SOUTH         | FLANGE          | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30199        | VALVE           | 700 SPHR         |                 | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 28020        | CONECT          | 500 EAST         |                 | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51107        | CONECT          | 500 EAST         | PLG             | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32566        | VALVE           | 700SOUTH         |                 | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31163        | VALVE           | 700 SPHR         |                 | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31562        | VALVE           | 700SOUTH         |                 | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31554        | CONECT          | 700SOUTH         | FLANGE          | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15318        | CONECT          | 200 SWSD         |                 | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31317        | CONECT          | 700NORTH         | FLANGE          | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 25685        | CONECT          | 400 NESD         | SCW             | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30046        | CONECT          | 700 SPHR         | FLANGE          | 8.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 30361        | VALVE           | 700 SPHR         |                 | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 14062        | CONECT          | 200 P/R          | SCW             | 1.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 14893        | CONECT          | 200 SWSD         | FLANGE          | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30831        | VALVE           | 700 SPHR         |                 | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 30504        | CONECT          | 700 SPHR         |                 | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 29992        | CONECT          | 700 SPHR         | FLANGE          | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 32013        | CONECT          | 700SOUTH         | SCW             | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14696        | CONECT          | 200 SWSD         |                 | 3.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32147        | CONECT          | 700SOUTH         | TEE             | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30260        | VALVE           | 700 SPHR         |                 | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32075        | CONECT          | 700SOUTH         | SCW             | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12669        | CONECT          | 200 EAST         |                 | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30886        | VALVE           | 700 SPHR         |                 | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30076        | CONECT          | 700SOUTH         |                 | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15280        | VALVE           | 200 SWSD         | BALL            | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30013        | VALVE           | 700SOUTH         |                 | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 27971        | CONECT          | 500 EAST         | FLANGE          | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32008        | VALVE           | 700SOUTH         | BALL            | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12741        | VALVE           | 200 EAST         |                 | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32714        | VALVE           | 700SOUTH         | CHECK           | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28699        | CONECT          | 500 WEST         | FLANGE          | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29721        | CONECT          | 700 SPHR         | FLANGE          | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 15340        | VALVE           | 200 SWSD         |                 | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29686        | CONECT          | 700 SPHR         |                 | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 29363        | CONECT          | 500 EAST         | FLANGE          | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29779        | CONECT          | 700 SPHR         |                 | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30042        | CONECT          | 700 SPHR         | SCW             | 6.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 30239        | CONECT          | 700 SPHR         | FLANGE          | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31950        | CONECT          | 700SOUTH         | PLG             | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30999        | CONECT          | 700 SPHR         |                 | 6.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 114146       | VALVE           | 700 SPHR         | TOR OPERATED VA | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32046        | VALVE           | 700SOUTH         | BALL            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30202        | CONECT          | 700 SPHR         | SCW             | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 32266        | CONECT          | 700SOUTH         | FLANGE          | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31201        | CONECT          | 700NORTH         | SCW             | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14710        | CONECT          | 200 SWSD         |                 | 3.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32007        | CONECT          | 700SOUTH         | SCW             | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30180        | CONECT          | 700 SPHR         | SCW             | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30074        | VALVE           | 700SOUTH         |                 | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |

| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 30248        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 25676        | CONECT          | 400 NESD         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30456        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32020        | CONECT          | 700SOUTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 114474       | CONECT          | 700 SPHR         | ELB            | 1.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30325        | CONECT          | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32022        | CONECT          | 700SOUTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15282        | CONECT          | 200 SWSD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 13537        | VALVE           | 200 SESD         | BALL           | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30166        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30237        | VALVE           | 700 SPHR         |                | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 14695        | VALVE           | 200 SWSD         |                | 3.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 114416       | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31375        | CONECT          | 700NORTH         | SCW            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15347        | CONECT          | 200 SWSD         |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31869        | VALVE           | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29747        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 29728        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 32012        | VALVE           | 700SOUTH         | BALL           | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29414        | VALVE           | 500 EAST         |                | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31620        | VALVE           | 700SOUTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31513        | VALVE           | 700NORTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28595        | CONECT          | 500 EAST         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30164        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 15316        | VALVE           | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30168        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30367        | VALVE           | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 15338        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32134        | CONECT          | 700SOUTH         | PLG            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32170        | CONECT          | 700SOUTH         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30474        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 15293        | CONECT          | 200 SWSD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14900        | CONECT          | 200 SWSD         |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29161        | CONECT          | 700SOUTH         |                | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31579        | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30512        | VALVE           | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 114473       | CONECT          | 700 SPHR         | ELB            | 1.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31481        | CONECT          | 700NORTH         | FLANGE         | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30459        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 51317        | CONECT          | 500 EAST         | FLANGE         | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51118        | CONECT          | 500 EAST         | ELB            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32139        | CONECT          | 700SOUTH         | SCW            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15324        | VALVE           | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31552        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30952        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 29700        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 15777        | CONECT          | 200 SWSD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29979        | CONECT          | 700 SPHR         | SCW            | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30955        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30004        | CONECT          | 700 SPHR         | FLANGE         | 4.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 29770        | VALVE           | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 114415       | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14041        | VALVE           | 200 SESD         | BALL           | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28101        | CONECT          | 500 EAST         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31090        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |

| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 14158        | CONECT          | 200 P/R          | FLANGE         | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32159        | CONECT          | 700SOUTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31371        | CONECT          | 700NORTH         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 101314       | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32027        | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30836        | CONECT          | 700 SPHR         |                | 4.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 13145        | VALVE           | 200 EAST         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 25697        | VALVE           | 400 NESD         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14895        | CONECT          | 200 SWSD         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 114471       | CONECT          | 700 SPHR         | FLANGE         | 1.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30885        | CONECT          | 700NORTH         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30461        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 114147       | CONECT          | 700 SPHR         | FLANGE         | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31567        | VALVE           | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30954        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 32124        | CONECT          | 700SOUTH         | GAUGE          | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30315        | CONECT          | 700 SPHR         |                | 1.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 30838        | VALVE           | 700 SPHR         |                | 2.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 51121        | CONECT          | 500 EAST         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12739        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 14526        | CONECT          | 200 SESD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31149        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 51108        | CONECT          | 500 EAST         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28030        | CONECT          | 500 EAST         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 24850        | VALVE           | 400 NESD         | CONT           | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30014        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 31172        | VALVE           | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31002        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30910        | CONECT          | 700 SPHR         | R-DISC         | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 12727        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31196        | CONECT          | 700NORTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30029        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 13056        | CONECT          | 200 EAST         | GAUGE          | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29996        | CONECT          | 700 SPHR         | FLANGE         | 6.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 31147        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30487        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30884        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30234        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 29691        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30907        | VALVE           | 700 SPHR         | R-DISC         | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 30492        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31363        | VALVE           | 700NORTH         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29180        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12767        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30254        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 12744        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31873        | CONECT          | 700SOUTH         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30031        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 14721        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31879        | CONECT          | 700SOUTH         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32039        | VALVE           | 700SOUTH         | BALL           | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31572        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30204        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 13058        | VALVE           | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 28698        | CONECT          | 500 WEST         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |

| Component ID | Component Class | Area Description | Component Type  | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|-----------------|---------|----------------|----------|---------|------------|
| 32093        | CONECT          | 700SOUTH         | SCW             | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12667        | VALVE           | 200 EAST         |                 | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30902        | VALVE           | 700 SPHR         |                 | 6.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 29788        | VALVE           | 700 SPHR         |                 | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30319        | CONECT          | 700 SPHR         |                 | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32157        | CONECT          | 700SOUTH         | SCW             | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29783        | CONECT          | 700 SPHR         |                 | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31711        | CONECT          | 700SOUTH         | FLANGE          | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30251        | CONECT          | 700 SPHR         |                 | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 32122        | CONECT          | 700SOUTH         |                 | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29167        | CONECT          | 700SOUTH         | FLANGE          | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30490        | VALVE           | 700 SPHR         |                 | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 32126        | VALVE           | 700SOUTH         | BALL            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 114143       | VALVE           | 700 SPHR         | TOR OPERATED VA | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31176        | CONECT          | 700 SPHR         |                 | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32017        | CONECT          | 700SOUTH         |                 | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32713        | CONECT          | 700SOUTH         | SCW             | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 50681        | CONECT          | 200 EAST         | FLANGE          | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30758        | VALVE           | 700 SPHR         | R-DISC          | 6.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 14871        | VALVE           | 200 SWSD         |                 | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30178        | CONECT          | 700 SPHR         | FLANGE          | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 30233        | CONECT          | 700 SPHR         | FLANGE          | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 114477       | CONECT          | 700 SPHR         | FLANGE          | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 114414       | VALVE           | 700SOUTH         | BALL            | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29998        | CONECT          | 700 SPHR         | FLANGE          | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 30209        | VALVE           | 700 SPHR         |                 | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 30197        | VALVE           | 700 SPHR         |                 | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30023        | CONECT          | 700 SPHR         | FLANGE          | 2.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 31092        | CONECT          | 700 SPHR         | FLANGE          | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31209        | CONECT          | 700NORTH         | SCW             | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12572        | VALVE           | 200 EAST         |                 | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 114475       | VALVE           | 700 SPHR         | BALL            | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32174        | CONECT          | 700SOUTH         | ELB             | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31005        | CONECT          | 700 SPHR         |                 | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 28002        | CONECT          | 500 EAST         | FLANGE          | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28001        | CONECT          | 500 EAST         | FLANGE          | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31563        | VALVE           | 700SOUTH         |                 | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29178        | VALVE           | 700SOUTH         | VALVE           | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32137        | CONECT          | 700SOUTH         | SCW             | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29142        | CONECT          | 700SOUTH         | FLANGE          | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15332        | CONECT          | 200 SWSD         |                 | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 51111        | CONECT          | 500 EAST         | ELB             | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32099        | CONECT          | 700SOUTH         | FLANGE          | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29685        | CONECT          | 700 SPHR         |                 | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 32716        | CONECT          | 700SOUTH         | FLANGE          | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29140        | CONECT          | 700SOUTH         | FLANGE          | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29116        | CONECT          | 700SOUTH         | FLANGE          | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 11643        | CONECT          | 200 EAST         |                 | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 12729        | CONECT          | 200 EAST         |                 | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 11733        | CONECT          | 200 EAST         | GAUGE           | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31870        | CONECT          | 700SOUTH         |                 | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32014        | CONECT          | 700SOUTH         | PLG             | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31086        | CONECT          | 700 SPHR         | FLANGE          | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 15646        | VALVE           | 200 SWSD         |                 | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12740        | CONECT          | 200 EAST         |                 | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |

| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 32048        | CONECT          | 700SOUTH         | PLG            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29690        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 114144       | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31248        | VALVE           | 700NORTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29784        | VALVE           | 700 SPHR         |                | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31185        | CONECT          | 700NORTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30201        | VALVE           | 700 SPHR         | BLOCK VALVE    | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29693        | VALVE           | 700 SPHR         |                | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 29767        | VALVE           | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 28566        | CONECT          | 500 EAST         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30914        | CONECT          | 700 SPHR         |                | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 29696        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30227        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32029        | CONECT          | 700SOUTH         | SCW            | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30015        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 29697        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 31573        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14725        | CONECT          | 200 SWSD         | GAUGE          | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31400        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 51110        | CONECT          | 500 EAST         | ELB            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32030        | CONECT          | 700SOUTH         |                | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31709        | VALVE           | 700SOUTH         | VALVE          | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30189        | CONECT          | 700 SPHR         | SCW            | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 32026        | PUMP            | 700SOUTH         |                | 0.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30935        | CONECT          | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30876        | VALVE           | 700 SPHR         |                | 2.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 30019        | CONECT          | 700 SPHR         | FLANGE         | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30176        | CONECT          | 700 SPHR         | SCW            | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30075        | CONECT          | 700SOUTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14740        | VALVE           | 200 SWSD         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30186        | CONECT          | 700 SPHR         | SCW            | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 31381        | CONECT          | 700NORTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30044        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 30365        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30478        | CONECT          | 700 SPHR         |                | 0.13    | LL             | C-720A/B | 023/082 | > 10%      |
| 30892        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 31880        | CONECT          | 700SOUTH         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12721        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 114419       | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28022        | VALVE           | 500 EAST         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30295        | CONECT          | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 114479       | CONECT          | 700 SPHR         | PLG            | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30904        | VALVE           | 700 SPHR         |                | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 25581        | CONECT          | 400 NESD         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30829        | CONECT          | 700 SPHR         |                | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 32011        | CONECT          | 700SOUTH         | TEE            | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31570        | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29786        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30028        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 29759        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30314        | VALVE           | 700 SPHR         |                | 1.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 30253        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 14084        | VALVE           | 200 P/R          |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32006        | VALVE           | 700SOUTH         | BALL           | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29148        | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |

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|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 30932        | VALVE           | 700 SPHR         |                | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30882        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30827        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30241        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 29778        | VALVE           | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30021        | CONECT          | 700 SPHR         | FLANGE         | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 31224        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31712        | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29187        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 11641        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29132        | CONECT          | 700SOUTH         |                | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31553        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28563        | CONECT          | 500 EAST         | SCW            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32023        | CONECT          | 700SOUTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31207        | CONECT          | 700NORTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29718        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30261        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30039        | CONECT          | 700 SPHR         | FLANGE         | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 51114        | CONECT          | 500 EAST         | GAUGE          | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29768        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 28458        | VALVE           | 500 EAST         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30165        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30475        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30232        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30316        | CONECT          | 700 SPHR         |                | 1.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 32021        | VALVE           | 700SOUTH         | BALL           | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 114145       | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30244        | CONECT          | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 30956        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 32004        | CONECT          | 700SOUTH         | FLANGE         | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29744        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 32596        | VALVE           | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30027        | VALVE           | 700 SPHR         | CONT           | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 50679        | CONECT          | 200 EAST         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51316        | PUMP            | 500 EAST         |                | 0.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 13862        | VALVE           | 200 P/R          |                | 1.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32127        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30077        | CONECT          | 700SOUTH         |                | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32267        | CONECT          | 700SOUTH         | FLANGE         | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31151        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 31488        | CONECT          | 700NORTH         | FLANGE         | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30468        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 29790        | VALVE           | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 32009        | CONECT          | 700SOUTH         | SCW            | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51116        | CONECT          | 500 EAST         | REDUCER        | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29785        | VALVE           | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32715        | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31161        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 31174        | CONECT          | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 51318        | CONECT          | 500 EAST         | FLANGE         | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32130        | VALVE           | 700SOUTH         | BALL           | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30828        | VALVE           | 700 SPHR         |                | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 32025        | CONECT          | 700SOUTH         | SCW            | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30471        | VALVE           | 700 SPHR         |                | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29699        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |



| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 29745        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30250        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30472        | CONECT          | 700 SPHR         |                | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30246        | CONECT          | 700 SPHR         | SCW            | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 28016        | VALVE           | 500 EAST         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51125        | CONECT          | 500 EAST         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29361        | CONECT          | 500 EAST         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30503        | CONECT          | 700 SPHR         | SCW            | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 30240        | VALVE           | 700 SPHR         |                | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31143        | CONECT          | 700 SPHR         |                | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30479        | CONECT          | 700 SPHR         |                | 0.13    | LL             | C-720A/B | 023/082 | > 10%      |
| 30463        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 29981        | CONECT          | 700 SPHR         | SCW            | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30433        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30874        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30911        | VALVE           | 700 SPHR         |                | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 51117        | CONECT          | 500 EAST         | REDUCER        | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15283        | VALVE           | 200 SWSD         | BALL           | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31568        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30008        | CONECT          | 700 SPHR         | FLANGE         | 4.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 29698        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 114472       | CONECT          | 700 SPHR         | FLANGE         | 1.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31571        | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28588        | CONECT          | 500 EAST         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51109        | CONECT          | 500 EAST         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31593        | VALVE           | 700SOUTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29720        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 50680        | CONECT          | 200 EAST         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31565        | VALVE           | 700SOUTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51120        | CONECT          | 500 EAST         | ELB            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51119        | CONECT          | 500 EAST         | ELB            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29782        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31236        | VALVE           | 700NORTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31622        | CONECT          | 700SOUTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31871        | CONECT          | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32131        | CONECT          | 700SOUTH         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29174        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30486        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31883        | CONECT          | 700SOUTH         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29781        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30488        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31178        | CONECT          | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29792        | CONECT          | 700 SPHR         |                | 1.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32135        | VALVE           | 700SOUTH         | BALL           | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12754        | CONECT          | 200 EAST         | SCW            | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30862        | CONECT          | 700NORTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29417        | CONECT          | 500 EAST         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 27995        | CONECT          | 500 EAST         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14036        | VALVE           | 200 SESD         | CONT           | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29746        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 15334        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30913        | CONECT          | 700 SPHR         | R-DISC         | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 30369        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29138        | VALVE           | 700SOUTH         | BALL           | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14712        | CONECT          | 200 SWSD         |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |

| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 29689        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30496        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 15336        | CONECT          | 200 SWSD         | GAUGE          | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29773        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30499        | CONECT          | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 14889        | CONECT          | 200 SWSD         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30047        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32037        | CONECT          | 700SOUTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32125        | CONECT          | 700SOUTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30700        | CONECT          | 700 SPHR         |                | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 15346        | CONECT          | 200 SWSD         |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 14126        | CONECT          | 200 SESD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29580        | CONECT          | 700 SPHR         |                | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 20093        | CONECT          | 200 SWSD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31000        | CONECT          | 700 SPHR         |                | 6.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 32033        | CONECT          | 700SOUTH         |                | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31383        | CONECT          | 700NORTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31142        | CONECT          | 700 SPHR         |                | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30177        | VALVE           | 700 SPHR         | CONT           | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 14167        | CONECT          | 200 SESD         |                | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29166        | CONECT          | 700SOUTH         | FLANGE         | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14300        | CONECT          | 200 SESD         | FLANGE         | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29722        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31397        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31494        | CONECT          | 700NORTH         | FLANGE         | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31006        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 32143        | CONECT          | 700SOUTH         | SCW            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29732        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 51115        | CONECT          | 500 EAST         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31878        | VALVE           | 700SOUTH         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32047        | CONECT          | 700SOUTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29114        | VALVE           | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29793        | CONECT          | 700 SPHR         |                | 1.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 12758        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 14719        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32005        | CONECT          | 700SOUTH         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28084        | CONECT          | 500 EAST         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 50684        | CONECT          | 200 EAST         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30207        | VALVE           | 700 SPHR         |                | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 31461        | VALVE           | 700NORTH         |                | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14898        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 15322        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30318        | CONECT          | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32167        | VALVE           | 700SOUTH         | BALL           | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32015        | VALVE           | 700SOUTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29360        | CONECT          | 500 EAST         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31630        | CONECT          | 700SOUTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30020        | CONECT          | 700 SPHR         | FLANGE         | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 51123        | CONECT          | 500 EAST         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30760        | VALVE           | 700 SPHR         | R-DISC         | 6.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 32181        | VALVE           | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31419        | VALVE           | 700NORTH         |                | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15320        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30880        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 32711        | CONECT          | 700SOUTH         | FLANGE         | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |

| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 32095        | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 25686        | CONECT          | 400 NESD         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29730        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30863        | CONECT          | 700NORTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15291        | CONECT          | 200 SWSD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29364        | CONECT          | 500 EAST         | FLANGE         | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30905        | CONECT          | 700 SPHR         |                | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 14887        | CONECT          | 200 SWSD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32003        | PUMP            | 700SOUTH         |                | 0.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31566        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28018        | CONECT          | 500 EAST         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29725        | CONECT          | 700 SPHR         | FLANGE         | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 30026        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 15295        | VALVE           | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 14293        | CONECT          | 200 SESD         | FLANGE         | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30894        | VALVE           | 700 SPHR         |                | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 31159        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 14694        | CONECT          | 200 SWSD         |                | 3.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31373        | CONECT          | 700NORTH         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14891        | CONECT          | 200 SWSD         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30502        | CONECT          | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 31556        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32163        | CONECT          | 700SOUTH         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28071        | CONECT          | 500 EAST         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31167        | CONECT          | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32034        | CONECT          | 700SOUTH         | TEE            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31868        | CONECT          | 700SOUTH         | FLANGE         | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 13060        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31874        | CONECT          | 700SOUTH         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30933        | VALVE           | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30258        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 29681        | VALVE           | 700 SPHR         |                | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 29695        | CONECT          | 700 SPHR         |                | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 14061        | CONECT          | 200 P/R          | SCW            | 1.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 28104        | VALVE           | 500 EAST         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30893        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 31187        | CONECT          | 700NORTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30230        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31379        | CONECT          | 700NORTH         | SCW            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29579        | CONECT          | 700 SPHR         |                | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 30030        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 30484        | CONECT          | 700 SPHR         |                | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 12752        | CONECT          | 200 EAST         | GAUGE          | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30259        | CONECT          | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 15315        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30917        | CONECT          | 700 SPHR         |                | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 32712        | CONECT          | 700SOUTH         | GAUGE          | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32031        | VALVE           | 700SOUTH         | BALL           | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29413        | VALVE           | 500 EAST         |                | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12725        | VALVE           | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32032        | CONECT          | 700SOUTH         |                | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30179        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 30470        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30263        | VALVE           | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29694        | CONECT          | 700 SPHR         |                | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |

| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 28103        | CONECT          | 500 EAST         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29684        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 12695        | VALVE           | 200 EAST         | VALVE          | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32036        | VALVE           | 700SOUTH         | BALL           | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31361        | VALVE           | 700NORTH         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32149        | VALVE           | 700SOUTH         | BALL           | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28107        | CONECT          | 500 EAST         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30900        | CONECT          | 700 SPHR         |                | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 28697        | CONECT          | 500 WEST         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12756        | VALVE           | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30501        | CONECT          | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 29723        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30476        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31169        | VALVE           | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 24852        | CONECT          | 400 NESD         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30485        | CONECT          | 700 SPHR         |                | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 28080        | CONECT          | 500 EAST         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30245        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 14528        | CONECT          | 200 SESD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14711        | VALVE           | 200 SWSD         |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 14732        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 12697        | CONECT          | 200 EAST         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30834        | VALVE           | 700 SPHR         |                | 4.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 29776        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30252        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29682        | CONECT          | 700 SPHR         |                | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 31088        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31189        | CONECT          | 700NORTH         | SCW            | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32172        | CONECT          | 700SOUTH         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51105        | VALVE           | 500 EAST         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30480        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 25703        | VALVE           | 400 NESD         | BLOCK VALVE    | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15281        | CONECT          | 200 SWSD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32165        | CONECT          | 700SOUTH         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12671        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31004        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 32175        | CONECT          | 700SOUTH         | SCW            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 27961        | VALVE           | 500 EAST         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29741        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30017        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 29734        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30462        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30163        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 13057        | CONECT          | 200 EAST         | SCW            | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 14524        | CONECT          | 200 SESD         | FLANGE         | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12574        | VALVE           | 200 EAST         |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 28024        | VALVE           | 500 EAST         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29165        | VALVE           | 700SOUTH         | VALVE          | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 11731        | VALVE           | 200 EAST         |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 14713        | CONECT          | 200 SWSD         |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30040        | CONECT          | 700 SPHR         | FLANGE         | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 30321        | VALVE           | 700 SPHR         |                | 0.25    | LL             | C-720A/B | 023/082 | > 10%      |
| 14730        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32132        | CONECT          | 700SOUTH         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32597        | CONECT          | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |

| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 114470       | VALVE           | 700 SPHR         | BALL           | 1.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32100        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29688        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 12731        | VALVE           | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32051        | CONECT          | 700SOUTH         |                | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29176        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31509        | VALVE           | 700NORTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15297        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29170        | VALVE           | 700SOUTH         | VALVE          | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31171        | VALVE           | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29107        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 27998        | CONECT          | 500 EAST         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32098        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15345        | CONECT          | 200 SWSD         |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32040        | CONECT          | 700SOUTH         | PLG            | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30242        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31330        | VALVE           | 700NORTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51124        | CONECT          | 500 EAST         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32567        | CONECT          | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31872        | VALVE           | 700SOUTH         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14753        | VALVE           | 200 SWSD         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30481        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31078        | CONECT          | 700 SPHR         | SCW            | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 29702        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30872        | VALVE           | 700 SPHR         |                | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30048        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30243        | CONECT          | 700 SPHR         | SCW            | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30022        | CONECT          | 700 SPHR         | FLANGE         | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 29172        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30231        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 14690        | VALVE           | 200 SWSD         |                | 3.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31569        | VALVE           | 700SOUTH         |                | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30495        | CONECT          | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 29757        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 32155        | VALVE           | 700SOUTH         | BALL           | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30327        | CONECT          | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 32598        | CONECT          | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31377        | CONECT          | 700NORTH         | SCW            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12765        | VALVE           | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30006        | CONECT          | 700 SPHR         | FLANGE         | 4.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 29743        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 51106        | CONECT          | 500 EAST         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32564        | PUMP            | 700SOUTH         |                | 0.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12746        | VALVE           | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29365        | CONECT          | 500 EAST         | FLANGE         | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32045        | CONECT          | 700SOUTH         | FLANGE         | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14877        | CONECT          | 200 SWSD         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31575        | CONECT          | 700SOUTH         | FLANGE         | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28565        | VALVE           | 500 EAST         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29995        | CONECT          | 700 SPHR         | FLANGE         | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 29777        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30483        | VALVE           | 700 SPHR         |                | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30024        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 28105        | CONECT          | 500 EAST         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31881        | VALVE           | 700SOUTH         |                | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |

| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 29146        | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51113        | CONECT          | 500 EAST         | ELB            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29370        | CONECT          | 500 EAST         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30363        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31876        | CONECT          | 700SOUTH         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28598        | CONECT          | 500 EAST         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28568        | CONECT          | 500 EAST         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15284        | CONECT          | 200 SWSD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30489        | CONECT          | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 30482        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30169        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 114148       | CONECT          | 700 SPHR         | FLANGE         | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 14728        | VALVE           | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29983        | CONECT          | 700 SPHR         | FLANGE         | 6.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 32569        | CONECT          | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30247        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 12760        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29128        | CONECT          | 700SOUTH         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12742        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30867        | CONECT          | 700NORTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30497        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30249        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31165        | CONECT          | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30434        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 14875        | CONECT          | 200 SWSD         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30317        | VALVE           | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31145        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30182        | CONECT          | 700 SPHR         | SCW            | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 15778        | CONECT          | 200 SWSD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31007        | CONECT          | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 31001        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30477        | VALVE           | 700 SPHR         |                | 0.13    | LL             | C-720A/B | 023/082 | > 10%      |
| 12673        | CONECT          | 200 EAST         | GAUGE          | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30460        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 32041        | VALVE           | 700SOUTH         | BALL           | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29362        | CONECT          | 500 EAST         | FLANGE         | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31710        | CONECT          | 700SOUTH         | FLANGE         | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28026        | CONECT          | 500 EAST         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32043        | VALVE           | 700SOUTH         | BALL           | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29109        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29717        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31153        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30500        | VALVE           | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 29724        | CONECT          | 700 SPHR         | FLANGE         | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 32049        | CONECT          | 700SOUTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29687        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30041        | CONECT          | 700 SPHR         | SCW            | 6.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 32028        | CONECT          | 700SOUTH         | FLANGE         | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30193        | CONECT          | 700 SPHR         | SCW            | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 30235        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30203        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 12748        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30025        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 30010        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 31077        | CONECT          | 700 SPHR         | SCW            | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |

| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 11639        | VALVE           | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30018        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 30200        | CONECT          | 700 SPHR         | SCW            | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 32153        | CONECT          | 700SOUTH         | FLANGE         | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14885        | CONECT          | 200 SWSD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14896        | VALVE           | 200 SWSD         |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29112        | CONECT          | 700SOUTH         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15319        | VALVE           | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30491        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 114478       | VALVE           | 700 SPHR         | GATE           | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30198        | VALVE           | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32096        | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30498        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 15326        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31867        | CONECT          | 700SOUTH         | FLANGE         | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30184        | CONECT          | 700 SPHR         | SCW            | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 27996        | VALVE           | 500 EAST         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30043        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 31866        | VALVE           | 700SOUTH         | BALL           | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29780        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32024        | CONECT          | 700SOUTH         | TEE            | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32182        | CONECT          | 700SOUTH         | GAUGE          | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 13144        | VALVE           | 200 EAST         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 50683        | CONECT          | 200 EAST         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32129        | CONECT          | 700SOUTH         | PLG            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30205        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30871        | VALVE           | 700 SPHR         |                | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 32151        | CONECT          | 700SOUTH         | FLANGE         | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28592        | CONECT          | 500 EAST         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31119        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30016        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 27958        | CONECT          | 500 EAST         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31157        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 15344        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 19978        | VALVE           | 200 SWSD         | BALL           | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30953        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30878        | VALVE           | 700 SPHR         | BLOCK VALVE    | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 15342        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29749        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 32052        | CONECT          | 700SOUTH         |                | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31175        | CONECT          | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31155        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 11735        | CONECT          | 200 EAST         | SCW            | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29369        | CONECT          | 500 EAST         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31576        | CONECT          | 700SOUTH         | FLANGE         | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31249        | VALVE           | 700NORTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14378        | VALVE           | 200 SESD         | BALL           | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15330        | VALVE           | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 14879        | CONECT          | 200 SWSD         | PLG            | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 114418       | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 114476       | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 28028        | CONECT          | 500 EAST         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29755        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31877        | CONECT          | 700SOUTH         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31884        | CONECT          | 700SOUTH         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |

| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 30226        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29994        | CONECT          | 700 SPHR         | FLANGE         | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 14522        | CONECT          | 200 SESD         | FLANGE         | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15317        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 12719        | CONECT          | 200 EAST         | SCW            | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29412        | CONECT          | 500 EAST         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29168        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29683        | CONECT          | 700 SPHR         |                | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 31882        | VALVE           | 700SOUTH         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32097        | VALVE           | 700SOUTH         | VALVE          | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32094        | CONECT          | 700SOUTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30167        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29791        | VALVE           | 700 SPHR         |                | 1.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30162        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 51112        | CONECT          | 500 EAST         | ELB            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29789        | VALVE           | 700 SPHR         |                | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32183        | CONECT          | 700SOUTH         | SCW            | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30323        | CONECT          | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30934        | CONECT          | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29719        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29692        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30466        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31080        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 28532        | VALVE           | 500 WEST         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29581        | CONECT          | 700 SPHR         |                | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 29771        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31564        | VALVE           | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30957        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 32568        | CONECT          | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29118        | CONECT          | 700SOUTH         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30371        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 14171        | CONECT          | 200 SESD         |                | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30000        | CONECT          | 700 SPHR         | FLANGE         | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 25580        | CONECT          | 400 NESD         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30473        | CONECT          | 700 SPHR         |                | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31316        | CONECT          | 700NORTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29787        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29775        | VALVE           | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 12720        | VALVE           | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 28083        | CONECT          | 500 EAST         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51102        | CONECT          | 500 EAST         | GAUGE          | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28581        | CONECT          | 500 EAST         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14873        | VALVE           | 200 SWSD         | BALL           | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32141        | VALVE           | 700SOUTH         | BALL           | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31121        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 32016        | CONECT          | 700SOUTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30887        | CONECT          | 700NORTH         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14157        | CONECT          | 200 P/R          | FLANGE         | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32042        | CONECT          | 700SOUTH         | SCW            | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32120        | CONECT          | 700SOUTH         |                | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14752        | VALVE           | 200 SWSD         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31003        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 114417       | VALVE           | 700SOUTH         | BALL           | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32128        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29158        | VALVE           | 700SOUTH         |                | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |



| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 30191        | CONECT          | 700 SPHR         | SCW            | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 12766        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31792        | CONECT          | 700SOUTH         | SCW            | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31173        | CONECT          | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 12750        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31094        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32050        | VALVE           | 700SOUTH         |                | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28590        | CONECT          | 500 EAST         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30175        | CONECT          | 700 SPHR         | SCW            | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 29769        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32019        | CONECT          | 700SOUTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32038        | CONECT          | 700SOUTH         | PLG            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31949        | CONECT          | 700SOUTH         | SCW            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14169        | CONECT          | 200 SESD         |                | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12575        | VALVE           | 200 EAST         |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29701        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 31493        | CONECT          | 700NORTH         | FLANGE         | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32010        | CONECT          | 700SOUTH         | SCW            | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 13059        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29416        | VALVE           | 500 EAST         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31079        | CONECT          | 700 SPHR         | SCW            | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 30866        | CONECT          | 700NORTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12723        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29993        | CONECT          | 700 SPHR         | FLANGE         | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 24851        | CONECT          | 400 NESD         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 50682        | CONECT          | 200 EAST         | FLANGE         | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 14717        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31526        | VALVE           | 700NORTH         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 20092        | CONECT          | 200 SWSD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32035        | CONECT          | 700SOUTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32044        | CONECT          | 700SOUTH         | FLANGE         | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32018        | VALVE           | 700SOUTH         | BALL           | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29144        | VALVE           | 700SOUTH         | BALL           | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28457        | VALVE           | 500 EAST         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32145        | CONECT          | 700SOUTH         | PLG            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29160        | CONECT          | 700SOUTH         |                | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31875        | VALVE           | 700SOUTH         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30002        | CONECT          | 700 SPHR         | FLANGE         | 6.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 14692        | CONECT          | 200 SWSD         |                | 3.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32161        | VALVE           | 700SOUTH         | BALL           | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32258        | VALVE           | 700SOUTH         | CHECK          | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28069        | CONECT          | 500 EAST         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15328        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |

## **Attachment XI.**

### **Compliance Plan**

## **Compliance Plan**

A compliance plan for groundwater monitoring and corrective action is not required for the facility. Therefore, information related to a compliance plan is not included in this section of the application.

## **Attachment XII.**

### **Hazardous Waste Permit Application Fee**

## **Attachment XIII.**

### **Confidential Material**

**Confidential Material**

No confidential information is being included in this permit application.

## **Part A Permit Application**

### **OxyChem Ingleside Plant**

## **Part A Application Form**



**Texas Commission on Environmental Quality**  
**Permit Application for a Hazardous Waste Storage/Processing/Disposal Facility**  
**Part A - Facility Background Information**

I. General Information

A. Facility Name: OxyChem Ingleside Plant

(Individual, Corporation, or Other Legal Entity Name)

TCEQ Solid Waste Registration No: 38280 EPA I.D. No.: TXD 982 286 932

Street Address (If Available): 4133 Highway 361

City: Gregory, State: Texas Zip Code: 78359

County: San Patricio

Telephone Number: (361) 776-6000 Charter Number: 1889306

If the application is submitted on behalf of a corporation, please identify the Charter Number as recorded with the Office of the Secretary of State for Texas.

B. Facility Contact

1. List those persons or firms who will act as primary contact for the applicant during the processing of the permit application. Also indicate the capacity in which each person may represent the applicant (engineering, legal, etc.). The person listed first will be the primary recipient of correspondence regarding this application. Include the complete mailing addresses and phone numbers.

**Aron Baggett, Environmental Manager**  
**Occidental Chemical Corporation**  
**P.O. Drawer CC**  
**Ingleside, Texas 78362**  
**(361) 776-6395**

2. If the application is submitted by a corporation or by a person residing out of state, the applicant must register an Agent in Service or Agent of Service with the Texas Secretary of State's office and provide a complete mailing address for the agent. The agent must be a Texas resident.

**Not Applicable**

C. Operator<sup>1</sup>: Identify the entity who will conduct facility operations.

Operator Name: Occidental Chemical Corporation

Address: P.O. Drawer CC

City: Ingleside, State: Texas Zip Code: 78362

Telephone Number: (361) 776-6000 Charter Number: 1889306

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<sup>1</sup> The operator has the duty to submit an application if the facility is owned by one person and operated by another [30 TAC 305.43(b)]. The permit will specify the operator and the owner who is listed on this application [Section 361.087 Texas Health and Safety Code].

#### D. Owner

1. Indicate the ownership status of the facility:

a. Private     X    

- (1)     X     Corporation  
(2) \_\_\_\_\_ Partnership  
(3) \_\_\_\_\_ Proprietorship  
(4) \_\_\_\_\_ Non-profit organization

b. Public \_\_\_\_\_

- (1) \_\_\_\_\_ Federal  
(2) \_\_\_\_\_ Military  
(3) \_\_\_\_\_ State  
(4) \_\_\_\_\_ Regional  
(5) \_\_\_\_\_ County  
(6) \_\_\_\_\_ Municipal  
(7) \_\_\_\_\_ Other (specify)

2. Does the operator own the facility units and facility property?

☒ Yes ☐ No

If you checked "no",

- a. Submit as "Attachment A" a copy of the lease for use of or the option to buy said facility units and/or facility property, as appropriate; and
- b. Identify the facility units' owner(s) and/or facility property owner(s). Please note that the owner(s) is/are required to sign the application on page 5.

Owner Name: Same As Operator

Address: \_\_\_\_\_

City: \_\_\_\_\_, State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Owner Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_, State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

E. Type of Application Submittal:

Initial   X   or Revision           

## F. Registration and Permit Information

Indicate (by listing the permit number(s) in the right-hand column below) all existing or pending State and/or Federal permits or construction approvals which pertain to pollution control or industrial solid waste management activities conducted by your plant or at your location. Complete each blank by entering the *permit number*, or the *date of application*, or "none".

| Relevant Program and/or Law                                                                                         | Permit No.         | Agency*         |
|---------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|
| 1. Texas Solid Waste Disposal Act                                                                                   | <u>See Table 1</u> | <u>--TCEQ--</u> |
| 2. Wastewater disposal under the Texas Water Code                                                                   | <u>See Table 1</u> | <u>--TCEQ--</u> |
| 3. Underground injection under the Texas Water Code                                                                 | <u>N/A</u>         | <u>N/A</u>      |
| 4. Texas Clean Air Act                                                                                              | <u>See Table 1</u> | <u>--TCEQ--</u> |
| 5. Texas Uranium Surface Mining & Reclamation Act                                                                   | <u>N/A</u>         | <u>N/A</u>      |
| 6. Texas Surface Coal Mining & Reclamation Act                                                                      | <u>N/A</u>         | <u>N/A</u>      |
| 7. Hazardous Waste Management program under the Resource Conservation and Recovery Act                              | <u>See Table 1</u> | <u>TCEQ/EPA</u> |
| 8. UIC program under the Safe Drinking Water Act                                                                    | <u>N/A</u>         | <u>N/A</u>      |
| 9. TPDES program under the Clean Water Act                                                                          | <u>See Table 1</u> | <u>TCEQ/EPA</u> |
| 10. PSD program under the Clean Air Act                                                                             | <u>See Table 1</u> | <u>TCEQ/EPA</u> |
| 11. Nonattainment program under the Clean Air Act                                                                   | <u>N/A</u>         | <u>N/A</u>      |
| 12. National Emission Standards for Hazardous Pollutants (NESHAP) Pre-construction approval under the Clean Air Act | <u>N/A</u>         | <u>N/A</u>      |
| 13. Ocean dumping permits under the Marine Protection Research and Sanctuaries Act                                  | <u>N/A</u>         | <u>N/A</u>      |
| 14. Dredge or fill permits under section 404 of the Clean Water Act                                                 | <u>--N/A--</u>     | <u>--N/A--</u>  |
| 15. Other relevant environmental permits                                                                            | <u>N/A</u>         | <u>N/A</u>      |

\*Use the following acronyms for each agency as shown below:

|       |                                             |
|-------|---------------------------------------------|
| TCEQ  | = Texas Commission on Environmental Quality |
| TRC   | = Texas Railroad Commission                 |
| TDH   | = Texas Department of Health                |
| TDA   | = Texas Department of Agriculture           |
| EPA   | = U.S. Environmental Protection Agency      |
| CORPS | = U.S. Army Corps of Engineers              |

G. Give a brief description of the nature of your business.

**Chemical manufacturing complex.**

H. TCEQ Core Data Form

The TCEQ requires that a Core Data Form (Form 10400) be submitted on all incoming applications. For more information regarding the Core Data Form, call (512) 239-1575 or go to the TCEQ website at [http://www.tceq.texas.gov/permitting/central\\_registry/guidance.html](http://www.tceq.texas.gov/permitting/central_registry/guidance.html).

**A current Core Data Form is attached.**

### Signature Page

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Operator Signature: T. Behne Date: 10-27-2025

Name and Official Title (type or print): Todd Behne - Plant Manager

Operator Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name and Official Title (type or print): \_\_\_\_\_

Operator Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name and Official Title (type or print): \_\_\_\_\_

Owner Signature: Same as Operator Date: \_\_\_\_\_

Name and Official Title (type or print): \_\_\_\_\_

To be completed by the operator if the application is signed by an authorized representative for the operator

I, Not Applicable hereby designate \_\_\_\_\_  
(operator) (authorized representative)

as my representative and hereby authorize said representative to sign any application, submit additional information as may be requested by the Commission; and/or appear for me at any hearing or before the Texas Commission on Environmental Quality in conjunction with this request for a Texas Water Code or Texas Solid Waste Disposal Act permit. I further understand that I am responsible for the contents of this application, for oral statements given by my authorized representative support of the application, and for compliance with the terms and conditions of any permit which might be issued based upon this application.

Printed or Typed Name of Operator or Principal Executive Officer

Signature

(Note: Application Must Bear Signature & Seal of Notary Public)

Subscribed and sworn to before me by the said Todd Behne on this  
27th day of October, 2025

My commission expires of the 9th day of April, 2029

Patty Kraft  
Notary Public in and for San Patricio County, Texas



## II. Facility Background Information

### A. Location of Facility for which the application is submitted

1. Give a description of the location of the facility site with respect to known or easily identifiable landmarks.

**The facility is located between Corpus Christi Bay and State Highway 361 at a location approximately three miles southeast of Gregory, Texas.**

2. Detail the access routes from the nearest U.S. or State Highway to the facility.

**The facility is accessed from State Highway 361 by turning South onto the entrance road to the plant, which is marked by a large Occidental Chemical Corporation sign. One then proceeds approximately 7/8 mile down the road for plant access.**

3. Enter the geographical coordinates of the facility:

Latitude: \_\_\_27\_\_\_ deg \_\_\_52\_\_\_ min \_\_\_51\_\_\_ sec

Longitude: \_\_\_97\_\_\_ deg \_\_\_14\_\_\_ min \_\_\_39\_\_\_ sec

4. Is the facility located on Indian lands?

☐ Yes ☒ No

### B. Legal Description of Facility

Submit as "Attachment B" a legal description(s) of the tract or tracts of land upon which the waste management operations referred to in this permit application occur or will occur. Although a legal description is required, a metes and bounds description is not necessary for urban sites with appropriate "lot" description(s). A survey plat or facility plan drawing which shows the specific points referenced in the survey should also be included in Attachment B.

**A legal description of the facility is included in Attachment B.**

### C. SIC Codes

List, in descending order of significance, the four digit standard industrial classification (SIC) codes which best describe your facility in terms of the principal products or services you produce or provide. Also, specify each classification in words. These classifications may differ from the SIC codes describing the operation generating the hazardous wastes.

| 4-digit SIC Code | Description                                                |
|------------------|------------------------------------------------------------|
| 2869             | Ethylene dichloride (EDC) and vinyl chloride monomer (VCM) |
| 2812             | Caustic and Chlorine                                       |
| 4911             | Electricity                                                |
| 2813             | Hydrogen                                                   |

SIC code numbers are descriptions which may be found in the Standard Industrial Classification Manual prepared by the Executive Officer of the President, Office of Management and Budget, which is available from the Government Printing Office,

### III. Wastes and Waste Management

#### A. Waste Generation and Management Activities

Is any hazardous waste [see Title 40, Code of Federal Regulations (CFR), Part 261] presently or proposed to be generated or received at your facility?

☒ Yes ☐ No

**If no**, skip to question Number 2 below.

**If yes**, answer the following question.

1. Are you presently registered with TCEQ as a solid waste generator?

☒ Yes ☐ No ☐ Pending

**If no**, contact the Industrial and Hazardous Waste Division of TCEQ in Austin, Texas to obtain registration information. Also, continue with the application form (go to Number 2 below).

**If yes**, go to Section I of your TCEQ Notice of Registration, determine which of your wastes are hazardous, and list these wastes (and mixtures) in Table III-1 (see Number 2 below).

2. Complete Table III-1, Hazardous Wastes and Management Activities, below, listing all hazardous wastes, all mixtures containing any hazardous wastes, and hazardous debris which were, are presently, or are proposed to be handled at your facility in interim status or permitted units. See 40 CFR 261 and 268.2, attaching additional copies as necessary.

**Table III-1 has been completed and is attached.**

*Guidelines for the Classification & Coding of Industrial Wastes and Hazardous Wastes*, TCEQ publication RG-22, contains guidance on how to properly classify and code industrial waste and hazardous waste in accordance with 30 TAC 335.501-335.515 (Subchapter R).

If you are not registered with TCEQ, enter "NA" for TCEQ Waste Code Number.

For the EPA Hazardous Waste Numbers, see 40 CFR 261.20-33. For annual quantity, provide the amount in units of pounds (as generated and/or received) for each waste and/or waste mixture.

#### B. Waste Management Units Summary

1. For each waste and waste mixture listed in Table III-1 that is stored, processed, and/or disposed on-site (except where such storage and/or processing is excluded from permit requirements in accordance with Texas Administrative Code (TAC) Section 335), complete Table III-2, Hazardous Waste Management Unit Checklist, and enter the name of each hazardous waste management unit (Note: Please make copies of Table III-2 if necessary).

Give the design capacity of each hazardous waste management unit in any of the units of measure shown. In the case of inactive or closed units for which design details are unavailable, an estimate of the design capacity is sufficient.

Please provide a description for each waste management unit described in your own words on the line provided for "Waste Management Unit."

**Table III-2 has been completed and attached and contains the above information.**

2. Has the applicant at any time conducted the on-site disposal of industrial solid waste now identified or listed as hazardous waste?

☐ Yes ☒ No

**If yes**, complete Table III-2 indicating the hazardous waste management units which were once utilized at your plant site but are no longer in service (i.e., inactive or closed facility units).

**If no**, and if no hazardous waste is presently or proposed to be stored [for longer than 90 days (see 30 TAC Section 335.53)], processed, or disposed of at your facility, then you need not file this permit application. Otherwise proceed with the application form.

3. Provide an estimate of the total weight (lbs) of hazardous waste material that has been disposed of and/or stored within your site boundaries and not removed to another site.

**Not Applicable. No onsite disposal has occurred, and indefinite storage onsite does not occur.**

#### C. Location of Waste Management Units

1. Submit as "Attachment C" a drawn-to-scale topographic map (or other map if a topographic map is unavailable) extending one mile beyond the facility boundaries, depicting the following:

**A topographic map containing the below elements is included as Attachment C.**

- a. The approximate boundaries of the facility (described in Section II.B) and within these boundaries, the location and boundaries of the areas occupied by each active, inactive, and proposed hazardous waste management unit (see Table III-2). Each depicted area should be labeled to identify the unit(s), unit status (i.e., active, inactive, or proposed), and areal size in acres.

**Facility boundaries and locations of hazardous waste management units are indicated in Attachment C. NOTE: There are no proposed hazardous waste management units in this application.**

- b. The overall facility and all surface intake and discharge structures;

**There are no surface intake structures at the facility. The**



**location of discharge structure Outfall 001 is indicated in Attachment C.**

- c. All on-site injection wells where liquids are injected underground;

**There are no injection wells at the facility.**

- d. All known monitor wells and boreholes within the property boundaries of the facility; and

**The few onsite monitoring wells are indicated on Attachment C. There are no boreholes at the facility.**

- e. All wells, springs, other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant within the map area and the purpose for which each water well is used (e.g., domestic, livestock, agricultural, industrial, etc.).

**There are no wells, springs, surface waters (aside from Corpus Christi Bay), or drinking water wells at the facility.**

2. Submit as "Attachment D" photographs which clearly delineate all hazardous waste management storage, processing, and disposal units, as well as sites of future storage, processing and disposal units.

**Photographs of the hazardous waste management units are included in Attachment D.**

**D. Flow Diagram/Description**

Show as "Attachment E" process flow diagrams and step-by-step word descriptions of the process flow, depicting the handling, collection, storage, processing, and/or disposal of each of the hazardous wastes previously listed in this application.

**A process flow diagram is included in Attachment E that contains the following information.**

The flow diagrams or descriptions should include the following information:

1. Originating point of each waste and waste classification code;
2. Means of conveyance utilized in every step of the process flow;
3. Name and function of each facility component through which the waste passes;
4. The ultimate disposition of all wastes (if off-site, specify "off-site") and waste residues.

#### IV. Index Of Attachments

List and index below all attachments to this application and indicate if included or not included:

| <b>Item</b> | <b>Attachments</b>                          | <b>Attachment</b> | <b>Included</b> | <b>Not Included</b> |
|-------------|---------------------------------------------|-------------------|-----------------|---------------------|
| I.D.2.a     | Lease/Option to buy                         | A                 |                 | X                   |
| II.B        | Site legal description                      | B                 | X               |                     |
| III.C.1     | Facility boundaries and adjacent waters map | C                 | X               |                     |
| III.C.2     | Photographs                                 | D                 | X               |                     |
| III.D       | Process flow diagram/description            | E                 | X               |                     |

Table III-1 – Hazardous Wastes and Management Activities

| Verbal Description of Waste            | TCEQ Waste for Code and Classification Code  | EPA Hazardous Waste Number                                   | Storage <sup>1</sup> of Wastes Received from Off-Site | Processing <sup>2</sup> of Wastes Received from Off-Site | Disposal of Wastes Received from Off-Site | Storage <sup>1</sup> of Wastes Generated On-Site | Processing <sup>2</sup> of Wastes Generated On-Site | Disposal of Wastes Generated On-Site | Annual Quantity Generated and/or Received |
|----------------------------------------|----------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------|-------------------------------------------|--------------------------------------------------|-----------------------------------------------------|--------------------------------------|-------------------------------------------|
| Oil and/or Solvent Contaminated Solids | 0106489H<br>0108407H<br>0241301H<br>0301301H | D028, D040<br>D043, F001<br>F003, K019<br>K020, U043<br>U077 |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 2.20                                      |
| Spent Paint Thinner                    | 0117211H                                     | D001, D035<br>F003, F005                                     |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 1.23                                      |
| Waste Paint Solids                     | 0133409H                                     | F003, F005                                                   |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 2.87                                      |
| Waste Oil                              | 0136206H                                     | D001, D028<br>D040, F001<br>F002                             |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 4.07                                      |
| Waste Resin, Sealant, or Varnish       | 0138219H<br>0140209H<br>0196409H             | D001, D003<br>F003                                           |                                                       |                                                          |                                           | X                                                |                                                     |                                      | NRG                                       |
| Fuel Oil Contaminated Water            | 0177205H                                     | D001, D018                                                   |                                                       |                                                          |                                           | X                                                |                                                     |                                      | NRG                                       |
| Spent Carbon Canisters and Can Residue | 0190404H<br>0192204H<br>0196409H             | D001, D035<br>D040, F003                                     |                                                       |                                                          |                                           | X                                                |                                                     |                                      | NRG                                       |
| Biosolids                              | 0228491H                                     | F001, F003<br>F005, F025<br>K019, K020                       |                                                       |                                                          |                                           | X                                                |                                                     |                                      | NRG                                       |

<sup>1</sup> "Storage" means the holding of solid waste for a temporary period, at the end of which the waste is processed, disposed of, or stored elsewhere.

<sup>2</sup> "Processing" means the extraction of materials, transfer, volume reduction, conversion to energy, or other separation and preparation of solid waste for reuse or disposal, including the treatment or neutralization of hazardous waste, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy or material from the waste or so as to render such waste non-hazardous or less hazardous; safer for transport, store or dispose of; or amenable for recovery, amenable for storage, or reduced in volume. The "transfer" of solid waste for reuse or disposal as used above, does not include the actions of a transporter in conveying or transporting solid waste by truck, ship, pipeline, or other means. Unless the Executive Director determines that regulation of such activity is necessary to protect human health or the environment, the definition of "processing" does not include activities relating to those materials exempted by the Resource Conservation and Recovery Act, 42 U.S.C. 6901 et seq., as amended.

| Verbal Description of Waste     | TCEQ Waste for Code and Classification Code | EPA Hazardous Waste Number                                                                                   | Storage <sup>1</sup> of Wastes Received from Off-Site | Processing <sup>2</sup> of Wastes Received from Off-Site | Disposal of Wastes Received from Off-Site | Storage <sup>1</sup> of Wastes Generated On-Site | Processing <sup>2</sup> of Wastes Generated On-Site | Disposal of Wastes Generated On-Site | Annual Quantity Generated and/or Received |
|---------------------------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------|-------------------------------------------|--------------------------------------------------|-----------------------------------------------------|--------------------------------------|-------------------------------------------|
| Reboiler Scale                  | 0229407H                                    | D007, D019<br>D022, D028<br>D032, D040                                                                       |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 1.74                                      |
| EDC Contaminated Material       | 0238319H                                    | D028, F024                                                                                                   |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 41.08                                     |
| Incinerator Ash/Brick           | 0242303H<br>0243319H                        | F001, F003<br>F005, F025<br>K019, K020                                                                       |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 1.90                                      |
| VCM Furnace Coke                | 0244407H                                    | D001, D006<br>D007, D028<br>D043                                                                             |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 22.87                                     |
| Spent Catalyst                  | 0246393H<br>0298393H                        | D028, F001<br>F003, F005<br>F025, K019<br>K020                                                               |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 9.33                                      |
| VCM Trench Material             | 0247319H                                    | D028, D043<br>K019, K020<br>U077                                                                             |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 1.74                                      |
| VCM Heavy Ends                  | 0248219H<br>219H<br>202H                    | D001, D007<br>D019, D021<br>D022, D027<br>D028, D029<br>D032, D033<br>D034, D036<br>D039, D040<br>K019, K020 | X                                                     | X                                                        |                                           | X                                                | X                                                   |                                      | 18,954                                    |
| VCM Contaminated Filters/Carbon | 0249310H<br>0250404H                        | F025, D043                                                                                                   |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 2.96                                      |
| VCM Light Ends                  | 0251219H<br>219H                            | D001, D018<br>D019, D022<br>D028, D029<br>D040, F025                                                         | X                                                     | X                                                        |                                           | X                                                | X                                                   |                                      | 0.02                                      |
| Limestone Sludge                | 0253306H                                    | F001, F003<br>F005, F025<br>K019, K020                                                                       |                                                       |                                                          |                                           | X                                                |                                                     |                                      | NRG                                       |
| Rockbox                         | 0255319H                                    | F001, F003                                                                                                   |                                                       |                                                          |                                           | X                                                |                                                     |                                      | NRG                                       |

| Verbal Description of Waste       | TCEQ Waste for Code and Classification Code | EPA Hazardous Waste Number                                                 | Storage <sup>1</sup> of Wastes Received from Off-Site | Processing <sup>2</sup> of Wastes Received from Off-Site | Disposal of Wastes Received from Off-Site | Storage <sup>1</sup> of Wastes Generated On-Site | Processing <sup>2</sup> of Wastes Generated On-Site | Disposal of Wastes Generated On-Site | Annual Quantity Generated and/or Received |
|-----------------------------------|---------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------|-------------------------------------------|--------------------------------------------------|-----------------------------------------------------|--------------------------------------|-------------------------------------------|
| Residue                           |                                             | F005, F025<br>K019, K020                                                   |                                                       |                                                          |                                           |                                                  |                                                     |                                      |                                           |
| Mother Liquor                     | 0258219H                                    | D001, K019<br>K020                                                         |                                                       |                                                          |                                           | X                                                |                                                     |                                      | NRG                                       |
| Incinerator Flue Gas Scale        | 0289303H                                    | F001, F003<br>F005, F025<br>K019, K020                                     |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 0.03                                      |
| VCM Incinerator Acid              | 0293105H                                    | D002, F001<br>F003, F005<br>F025, K019<br>K020                             |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 16,234                                    |
| EDC Heavy Ends                    | 0339219H<br>219H<br>204H                    | D001, D002<br>D021, D022<br>D027, D028<br>D034, D036<br>D039, D040<br>K019 | X                                                     | X                                                        |                                           | X                                                | X                                                   |                                      | NRG                                       |
| Chlorine Butter, Solids, Elements | 0406609H<br>0405403H<br>0411319H            | D019, D022<br>D032, D034<br>D037, D039<br>D040, D042                       |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 0.11                                      |
| Natural Gas Condensate            | 0504219H                                    | D009, D018                                                                 |                                                       |                                                          |                                           | X                                                |                                                     |                                      | NRG                                       |
| Wastewater Solids/Sand            | 0276407H<br>0294319H                        | F001, F003<br>F005, F025<br>K019, K020                                     |                                                       |                                                          |                                           | X                                                |                                                     |                                      | 52.34                                     |
| Other Inorganic Waste             | Various                                     | Various                                                                    |                                                       |                                                          |                                           | X                                                |                                                     |                                      | NRG                                       |
| Other Organic Waste               | Various                                     | Various                                                                    |                                                       |                                                          |                                           | X                                                |                                                     |                                      | NRG                                       |

NRG - not routinely generated.

Note: annual generation rates are in tons and are based on the last three years of generation rates as reported via the annual waste summary.



## **Part A Attachment B**

### **Site Legal Description**

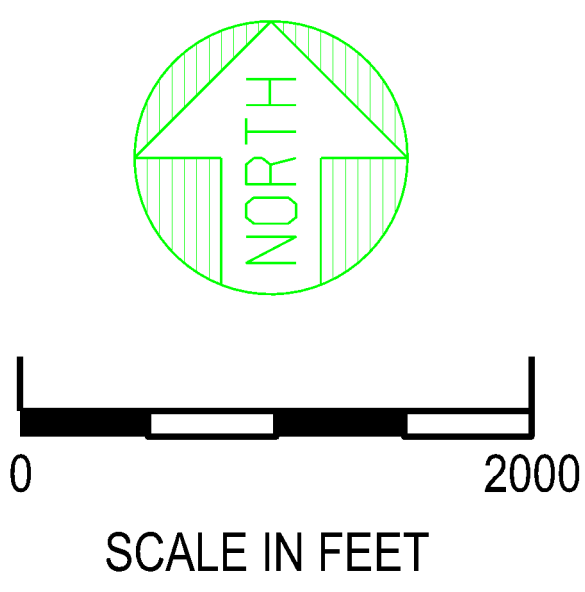
## **Part A Attachment C**

### **Facility Boundaries Map**





MAP SOURCE: USGS 7.5 MIN. QUAD SHEETS ARANSAS PASS, TX., 2022; GREGORY, TX, 2022, PORT OF INGLESIDE, TX, 2022, PORTLAND, TX, 2022



- FACILITY BOUNDARY
- ONE MILE RADIUS
- OUTFALL LOCATION
- MONITORING WELL LOCATION AND IDENTIFICATION NUMBER

OXYCHEM

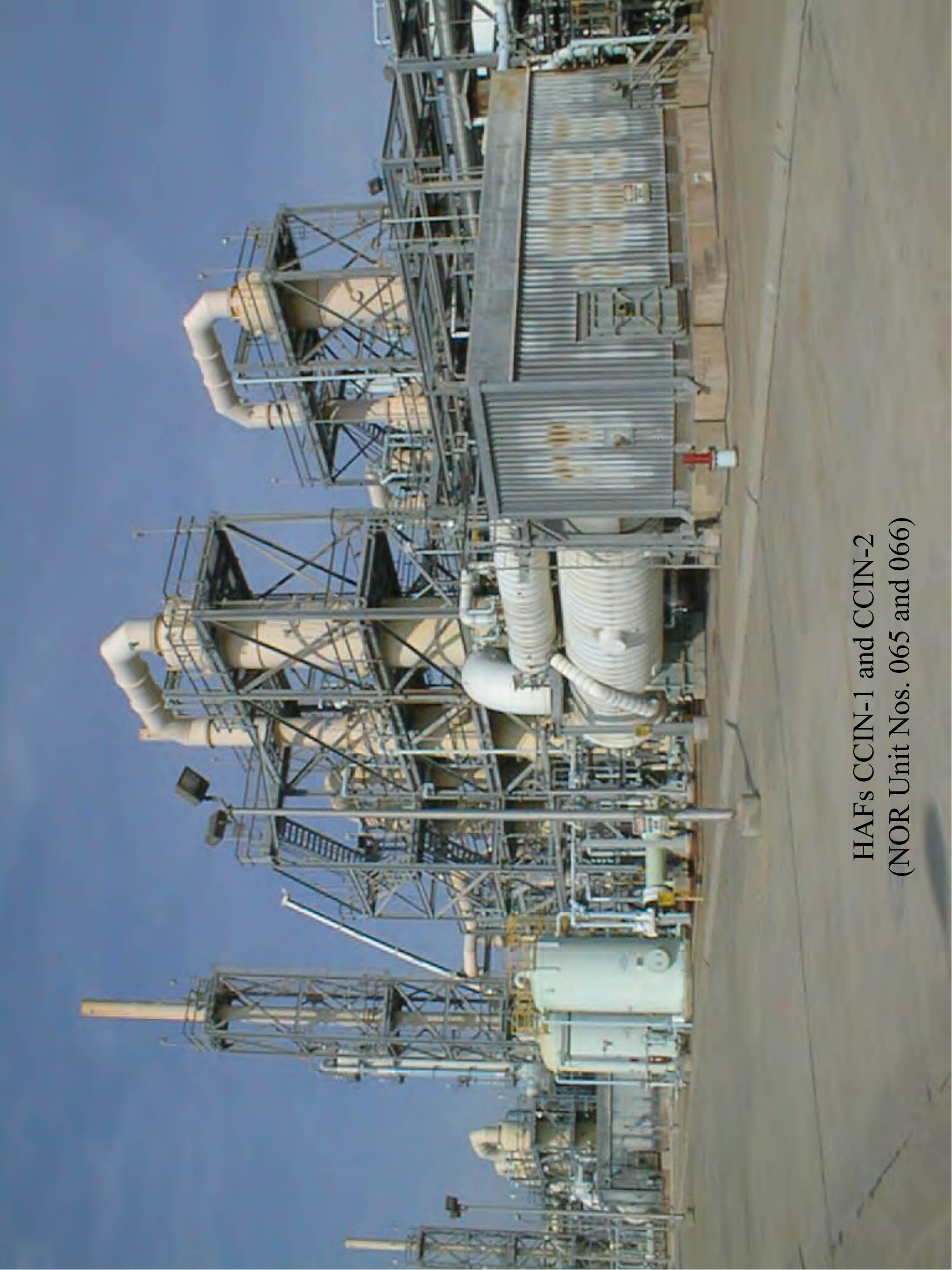
DATE: 06/17/2025 FILE: ATT-C-USGSMAP.DGN

ATTACHMENT C  
USGS MAP



## **Part A Attachment D**

### **Photographs**

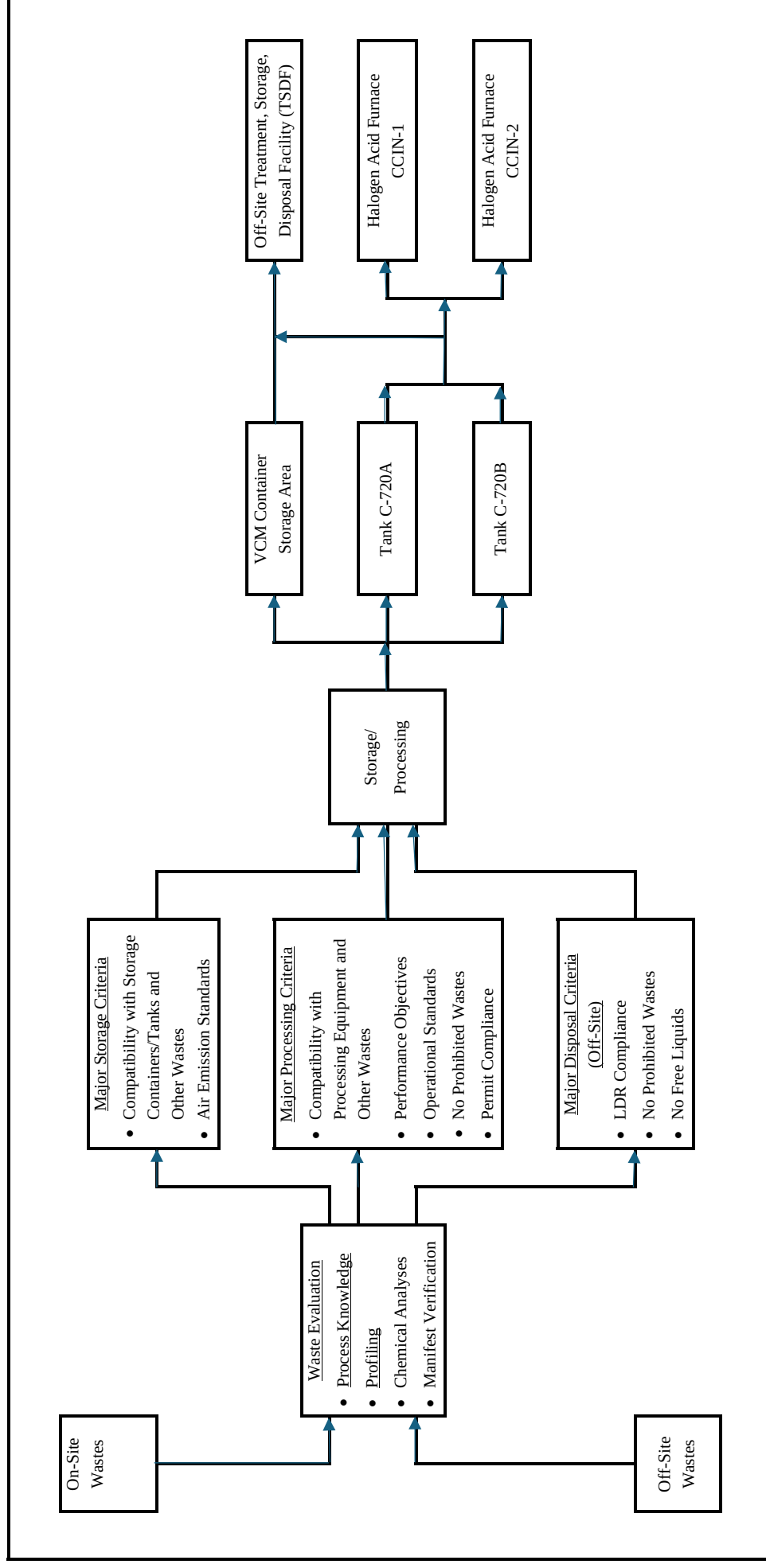


HAFs CCIN-1 and CCIN-2  
(NOR Unit Nos. 065 and 066)

## **Part A Attachment E**

### **Process Flow Diagram**

# Attachment E      Process Flow Diagram



## **Part B Permit Application**

### **OxyChem Ingleside Plant**

## **Attachment I.**

### **General Information**

**Table I.1 – Description of Proposed Application Changes**

| Permit/Compliance Plan Application Appendix/Section | Brief Description of Proposed Changes                                         | Modification or Amendment Type | Supporting Regulatory Citation                          |
|-----------------------------------------------------|-------------------------------------------------------------------------------|--------------------------------|---------------------------------------------------------|
| Throughout Application                              | Formatting and Grammar                                                        | Minor                          | 30 TAC 305.62(c)(2) and 40 CFR 270.41 App. I Item A.1   |
| Throughout Application                              | Correct Typographic Errors                                                    | Minor                          | 30 TAC 305.62(c)(2) and 40 CFR 270.41 App. I Item A.2   |
| III.B – Training Plan                               | Removed sections for closed and inactive units                                | Minor                          | 30 TAC 305.62(c)(2) and 40 CFR 270.41 App. I Item A.1   |
| III.E – Contingency Plan                            | Updated Emergency Coordinator Information                                     | Minor                          | 30 TAC 305.62(c)(2) and 40 CFR 270.41 App. I Item B.6.d |
| V.B.1 – VCM CSA                                     | Updated Closure Costs to 2024 Dollars                                         | Minor                          | 30 TAC 305.62(c)(2) and 40 CFR 270.41 App. I Item A.1   |
| V.C.1 – C-720A                                      | Revised Closure Schedule                                                      | Minor                          | 30 TAC 305.62(c)(2) and 40 CFR 270.41 App. I Item D.1.b |
| V.C.1 – C-720A                                      | Updated Closure Costs to 2024 Dollars                                         | Minor                          | 30 TAC 305.62(c)(2) and 40 CFR 270.41 App. I Item A.1   |
| V.C.2 – C-720B                                      | Revised Closure Schedule                                                      | Minor                          | 30 TAC 305.62(c)(2) and 40 CFR 270.41 App. I Item D.1.b |
| V.C.2 – C-720B                                      | Updated Closure Costs to 2024 Dollars                                         | Minor                          | 30 TAC 305.62(c)(2) and 40 CFR 270.41 App. I Item A.1   |
| V.I.1 – CCIN-1                                      | Revise regulatory citations and text from Incinerator to Halogen Acid Furnace | Minor                          | 30 TAC 305.62(c)(2) and 40 CFR 270.41 App. I Item A.1   |



**Table I.1 – Description of Proposed Application Changes**

| Permit/Compliance Plan Application Appendix/Section | Brief Description of Proposed Changes                                         | Modification or Amendment Type | Supporting Regulatory Citation                          |
|-----------------------------------------------------|-------------------------------------------------------------------------------|--------------------------------|---------------------------------------------------------|
| V.I.1 – CCIN-1                                      | Revised Closure Schedule                                                      | Minor                          | 30 TAC 305.62(c)(2) and 40 CFR 270.41 App. I Item D.1.b |
| V.I.1 – CCIN-1                                      | Updated Closure Costs to 2024 Dollars                                         | Minor                          | 30 TAC 305.62(c)(2) and 40 CFR 270.41 App. I Item A.1   |
| V.I.2 – CCIN-2                                      | Revise regulatory citations and text from Incinerator to Halogen Acid Furnace | Minor                          | 30 TAC 305.62(c)(2) and 40 CFR 270.41 App. I Item A.1   |
| V.I.2 – CCIN-2                                      | Revised Closure Schedule                                                      | Minor                          | 30 TAC 305.62(c)(2) and 40 CFR 270.41 App. I Item D.1.b |
| V.I.2 – CCIN-2                                      | Updated Closure Costs to 2024 Dollars                                         | Minor                          | 30 TAC 305.62(c)(2) and 40 CFR 270.41 App. I Item A.1   |
| VII. – Closure and Post-Closure                     | Updated Closure Costs to 2024 Dollars                                         | Minor                          | 30 TAC 305.62(c)(2) and 40 CFR 270.41 App. I Item A.1   |

## **Attachment I.A**

### **Table 1 – General Information**

**Table I: General Information****A. Applicant: Facility Operator**

|                                                          |                                 |
|----------------------------------------------------------|---------------------------------|
| Name <sup>1</sup>                                        | Occidental Chemical Corporation |
| Address <sup>2</sup>                                     | P.O. Drawer CC                  |
| City, State <sup>2</sup>                                 | Ingleside, Texas                |
| Zip Code <sup>2</sup>                                    | 78362                           |
| Telephone Number                                         | (361) 776-6000                  |
| Alternate Telephone Number                               |                                 |
| TCEQ Solid Waste Registration No.                        | 38280                           |
| EPA I.D. No.                                             | TXD 982 286 932                 |
| Permit No.                                               | 50322                           |
| County                                                   | San Patricio                    |
| Regulated Entity Name                                    | OxyChem Ingleside Plant         |
| Regulated Entity Reference Number (RN)                   | RN100211176                     |
| Customer Name <sup>2</sup>                               | Occidental Chemical Corporation |
| Customer Reference Number:                               | CN600125256                     |
| Charter Number <sup>3</sup>                              | 1889306                         |
| Previous or Former Names of the Facility (if applicable) | N/A                             |

**B. Facility Owner: Identify the Facility Owner if different than the Facility Operator<sup>4</sup>**
☒ Same as Facility Operator?

|                            |                                 |
|----------------------------|---------------------------------|
| Name                       | Occidental Chemical Corporation |
| Address                    | P.O. Drawer CC                  |
| City, State                | Ingleside, Texas                |
| Zip Code                   | 78362                           |
| Telephone Number           | (361) 776-6000                  |
| Alternate Telephone Number |                                 |

**C. Facility Contact****1. Persons or firms who will act as primary contact:**

|                            |                                     |
|----------------------------|-------------------------------------|
| Name, Title:               | Aron Baggett, Environmental Manager |
| Address                    | P.O. Box CC                         |
| City, State:               | Ingleside, Texas                    |
| Zip Code                   | 78362                               |
| Telephone Number           | (361) 776-6395                      |
| Alternate Telephone Number |                                     |
| E-mail                     |                                     |

**Persons or firms who will act as primary contact (if more than one):**

|                            |  |
|----------------------------|--|
| Name, Title:               |  |
| Address                    |  |
| City, State:               |  |
| Zip Code                   |  |
| Telephone Number           |  |
| Alternate Telephone Number |  |
| E-mail                     |  |

**2. Agent in Service or Agent of Service (if you are an out-of-state company)<sup>5</sup>:**

|              |  |
|--------------|--|
| Name, Title: |  |
| Address      |  |
| City, State: |  |
| Zip Code     |  |

**3. Individual responsible for causing notice to be published:**

|                            |                  |
|----------------------------|------------------|
| Name:                      | Aron Baggett     |
| Address                    | P.O. Box CC      |
| City, State:               | Ingleside, Texas |
| Zip Code                   | 78362            |
| Telephone Number           | (361) 776-6395   |
| Alternate Telephone Number |                  |
| E-mail                     |                  |

**4. Public place in county where application will be made available<sup>6</sup>:**

|             |                          |
|-------------|--------------------------|
| Name        | Ingleside Public Library |
| Address     | 2775 Waco Street         |
| City, State | Ingleside, Texas         |
| Zip Code    | 78362                    |

**D. Application Type and Facility Status****1. Application Type**☒ **Permit**☐ New☒ **Renewal**☐ Interim Status☐ Compliance Plan☐ RD&D☒ **Amendment**☐ Major☒ **Minor**☐ **Modification**☐ Class 3☐ Class 2☐ Class 1<sup>1</sup>☐ Class 1**2. Part of a Consolidated Permit Processing request?** [30 TAC Chapter 33]

No

**3. Does the application contain confidential material?**<sup>7</sup>

No

**4. Facility Status. Check all that apply**☐ Proposed☒ **Existing**☒ **On-Site**☒ **Off-site**☐ Commercial☐ Recycle☐ Land Disposal☐ Areal or capacity expansion☐ Compliance plan**5. Is the facility within the Coastal Management Program boundary?**

Yes

**6. Description of Application Changes**

Complete Table I.1 - Description of Proposed Application Changes

**Note: List all changes requested in Table. Unlisted requests risk remaining unaddressed or possibly denied if brought to the permit application reviewer's attention at a later time.****7. Total acreage of the facility being permitted:**

593

**8. Identify the name of the drainage basin and segment where the facility is located<sup>8</sup>**

River Segment

Corpus Christi Bay (Recreational Beaches)

River Basin

Bays and Estuaries - Segment 2481

**E. Facility Siting Summary:**

Is the facility located or proposed to be located:

1. Within a 100-year floodplain?
2. in wetlands?
3. In the critical habitat of an endangered species of plant or animal?
4. On the recharge zone of a sole-source aquifer?
5. In an area overlying a regional aquifer?
6. Withing 0.5 mile (2,640 feet) of an established residence, church, school , day care center, surface water body used for public drinking water supply, or dedicated public park?<sup>9</sup> [30 TAC 335.202]  
If Yes: the TCEQ shall not issue a permit for this facility.
7. In an area in which the governing body of the country or municipality has prohibited the processing or disposal of municipal hazardous waste or industrial solid waste?  
If yes: provide a copy of the ordinance or order.

No

No

No

No

Yes

No

No

**F. Wastewater and Stormwater Disposition**

1. Is the disposal of any waste to be accomplished by a waste disposal well at this facility?

No

If Yes: List WDW Permit No(s):

2. Will any point source discharge of effluent or rainfall runoff occur as a result of the proposed activities?

Yes

3. If Yes, is this discharge regulated by a TPDES or TCEQ permit?

☒ Yes

TCEQ Permit No.

WQ0003083000

TPDES Permit No.

TX0104876

☐ No

Date TCEQ discharge permit application filed:

Date TPDES discharge application filed:

**G. Information Required to Provide Notice**

## State Officials List [30 TAC 39]

## State Senator

|              |                                                       |
|--------------|-------------------------------------------------------|
| Name:        | Adam Hinojosa (email: adam.hinojosa@senate.texas.gov) |
| Address      | 1211 U.S. Hwy. 181                                    |
| City, State: | Portland, Texas                                       |
| Zip Code:    | 78374                                                 |

## State Representative

|              |                                                |
|--------------|------------------------------------------------|
| Name:        | J.M. Lozano (email: jm.lozano@house.texas.gov) |
| Address      | 1211 U.S. Hwy. 181, No. 106                    |
| City, State: | Portland, Texas                                |
| Zip Code     | 78374                                          |

## Local Officials List [30 TAC 39]

## Mayor

|              |                                            |
|--------------|--------------------------------------------|
| Name:        | Oscar Adame (email: mayor@inglesidetx.gov) |
| Address      | 2671 San Angelo Street                     |
| City, State: | Ingleside, Texas                           |
| Zip Code     | 78362                                      |

## Local Health Authority

|              |     |
|--------------|-----|
| Name:        | N/A |
| Address      |     |
| City, State: |     |
| Zip Code     |     |

## County Judge

|              |                                                   |
|--------------|---------------------------------------------------|
| Name:        | David Krebs (email: dkrebs@sanpatriciountytx.gov) |
| Address      | 400 West Sinton Street, #109                      |
| City, State: | Sinton, Texas                                     |
| Zip Code     | 78387                                             |

## County Health Authority

|              |                                                       |
|--------------|-------------------------------------------------------|
| Name:        | Gabriel Arroyo (email: garroyo@sanpatriciountytx.gov) |
| Address      | 313 North Rachal Avenue                               |
| City, State: | Sinton, Texas                                         |
| Zip Code     | 78387                                                 |



Based on the questions in the Bilingual Notice Instructions for this form, are you required to make alternate (Bilingual) notice for this application?

Yes

Bilingual Language(s):

Spanish

TCEQ Core Data Form Submitted?(Required)

Yes

Has any information changed on the TCEQ Core Data Form since the last submittal?

No

Signature on Application Submitted?  
(see Section I Instructions, Item c)

Yes

1. Individual, Corporation, or Other Legal Entity Name on the Permit - must match the Secretary of State's database records for the Facility).
2. The legal name and address must match the Core Data Form.
3. If the application is submitted on behalf of a corporation, please identify the Charter Number as recorded with the Office of the Secretary of State for Texas.
4. The operator has the duty to submit an application if the facility is owned by one person and operated by another [30 TAC 305.43(b)]. The permit will specify the operator and the owner who is listed on Part A of this application [Section 361.087, Texas Health and Safety Code].
5. If the application is submitted by a corporation or by a person residing out of state, the applicant register an Agent in Service or Agent of Service with the Texas Secretary of State's office and provide complete mailing address for the agent. The agent must be a Texas resident.
6. For applications for new permits, renewals, major amendments and Class 3 modifications a copy of the administratively complete application must be made available at a public place in the county where the facility is, or will be, located for review and copying by the public. Identify the public place in the county (e.g., public library, county court house, city hall), including the address, where the application will be made available for review and copying by the public.
7. For confidential information cross-reference the confidential material throughout the application to Section XIII: Confidential Material, and submit as a separate Section XIII document or binder conspicuously marked "CONFIDENTIAL".
8. Use the segments line map created by [TCEQ GIS Team](#) to find the Segment Name and Basin Name.
9. Use only for a new commercial hazardous waste management facility or areal expansion of an existing hazardous waste management facility or unit of that facility as defined in 30 TAC 335.202.

## **Attachment I.B**

### **TCEQ Core Data Form**

## **Attachment I.C**

### **Signature Page**

**Signature Page**

I, Todd J. Behne, Plant Manager,  
(Operator) (Title)

certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: T. J. Behne Date: 10/27/2025

**To be completed by the Operator if the application is signed by an Authorized Representative for the Operator**

I, \_\_\_\_\_, hereby designate \_\_\_\_\_  
[Print or Type Name] [Print or Type Name]

as my representative and hereby authorize said representative to sign any application, submit additional information as may be requested by the Commission; and/or appear for me at any hearing or before the Texas Commission on Environmental Quality in conjunction with this request for a Texas Water Code or Texas Solid Waste Disposal Act permit. I further understand that I am responsible for the contents of this application, for oral statements given by my authorized representative in support of the application, and for compliance with the terms and conditions of any permit which might be issued based upon this application.

Printed or Typed Name of Operator or Principal Executive Officer

Signature

SUBSCRIBED AND SWORN to before me by the said Todd Behne

On this 27th day of October, 2025

My commission expires on the 9th day of April, 2029

Notary Public in and for San Patricio County, Texas

[Note: Application Must Bear Signature & Seal of Notary Public]

Patty Kraft



## **Attachment I.E**

### **List and Map of Adjacent Landowners**

**Attachment II.**

**Facility Siting Criteria**

## **General Siting Criteria**

See the General Information Report presented in Attachment V.A of this application for the information related to General Siting Criteria for the facility.



**Table II**

Table II contains the following: Table II.A, Table II.B, Table II.C, Table II.D, Table II.E and Flooding from Section II. F of the Part B Application

**Table II.A - Requirements for Storage or Processing Facilities, Land Treatment Facilities, Waste Piles, Storage Surface Impoundments, and Landfills**

Is the facility located or proposed to be located<sup>1</sup>:

|                                                                                                                                                                                                                                                                                                                               |                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| In wetlands? [as applicable: 30 TAC 335.204(a)(2), (b)(2), (c)(2), (d)(2), and/or (e)(2)]                                                                                                                                                                                                                                     | No             |
| <b>If Yes:</b> the TCEQ shall not issue a permit for a new hazardous waste management facility or areal expansion of an existing facility into wetlands, pursuant to 30 TAC 335.205(a)(1).                                                                                                                                    |                |
| In the critical habitat of an endangered species of plant or animal? <sup>6</sup> [as applicable: 30 TAC 335.204(a)(8), (b)(10), (c)(9), (d)(9), and/or (e)(11)]                                                                                                                                                              | No             |
| <b>If Yes:</b> submit in Section V information demonstrating that design, construction, and operational features will prevent adverse effects on such critical habitat.                                                                                                                                                       |                |
| On the recharge zone of a sole-source aquifer? <sup>2</sup> [30 TAC 335.204(a)(3), (b)(3), (c)(3), (d)(3), and/or (e)(3)]                                                                                                                                                                                                     | No             |
| <b>If Yes:</b> then for storage and processing facilities (excluding storage surface impoundments), submit in Section V information demonstrating that secondary containment is provided to preclude migration to groundwater from spills, leaks, or discharges.                                                              |                |
| In an area overlying a regional aquifer? [as applicable: 30 TAC 335.204(a)(4), (b)(4), (c)(4), (d)(4), and/or (e)(4)]                                                                                                                                                                                                         | Yes, see below |
| <b>If Yes:</b> submit site-specific information in Section V and/or Section VI demonstrating compliance with 30 TAC 335.205(a)(1). See information in Attachment V.A Section 2.4.                                                                                                                                             |                |
| In areas where soil unit(s) are within five feet of the containment structure, or treatment zone, as applicable, that have a Unified Soil Classification of GW, GP, GM, GC, SW, SP, or SM, or a hydraulic conductivity greater than 10-5 cm/sec? [as applicable: 30 TAC 335.204(a)(5), (b)(5), (c)(5), (d)(5), and/or (e)(5)] | No             |
| <b>If Yes:</b> provide additional information in Sections V and/or Section VI demonstrating compliance with 30 TAC 335.205(a)(1)                                                                                                                                                                                              |                |
| In areas of direct drainage within one mile of a lake at its maximum conservation pool level, if the lake is used to supply public drinking water through a public water system? <sup>6</sup> [as applicable: 30 TAC 335.204 (a)(6), (b)(7), (c)(6), and/or (e)(8)].                                                          | No             |
| <b>If Yes:</b> provide information in Section V demonstrating compliance with 30 TAC 335.205(a)(1).                                                                                                                                                                                                                           |                |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| In areas of active geologic processes, including but not limited to erosion, submergence, subsidence, faulting, karst formation, flooding in alluvial flood wash zones, meandering river bank cuttings, or earthquakes? <sup>6</sup> [as applicable: 30 TAC 335.204(a)(7), (b)(8) ,(c)(7), (d)(7), and/or (e)(9)]                                                                                                                                                                                           | No |
| Within 30 feet of the upthrown side or 50 feet of the downthrown side of the actual or inferred surface expression of a fault that has reasonably been shown to have caused displacement of shallow Quaternary sediments or of man-made structures? <sup>6</sup> [as applicable: 30 TAC 335.204(a)(9), (b)(12) ,(c)(11), (d)(11), and/or (e)(13)]                                                                                                                                                           | No |
| <p><b>If Yes:</b> specify in Section V the design, construction, and operational features that will prevent adverse effects resulting from any fault movement.</p> <p>If a fault is found to be present, the width and location of the actual or inferred surface expression of the fault, including both the identified zone of deformation and the combined uncertainties in locating a fault trace, must be determined by a qualified geologist or geotechnical engineer and reported in Section VI.</p> |    |

**Table II.B. - Additional Requirements for Land Treatment Facilities [30 TAC 335.204(b)]:**

Is the land treatment facility located or proposed to be located:

Within 1000 feet of an established residence, church, school, day care center, surface water body used for a public drinking water supply, or dedicated public park which is in use at the time the notice of intent to file a permit application is filed with the commission, or which is in use at the time the permit application is filed with the commission?

**If Yes:** the TCEQ shall not issue a permit for a new hazardous waste land treatment unit or an areal expansion of an existing land treatment unit, pursuant to 30 TAC 335.204(b)(6) and 335.205(a).

Within 1000 feet of an area subject to active coastal shoreline erosion even though the area is protected by a barrier island or peninsula?

**If Yes:** submit in Section V.F design, construction, and operational features which will prevent adverse effects resulting from storm surge and erosion or scouring by water.

Within 5000 feet of a coastal shoreline subject to active shoreline erosion and which is unprotected by a barrier island or peninsula.

**If Yes:** submit Section V.F design, construction and operational features, which will prevent adverse effects resulting from storm surge and erosion or scouring by water.

On a barrier island or peninsula?

**If Yes:** the TCEQ shall not issue a permit for a new hazardous waste land treatment unit or an areal expansion of an existing land treatment unit, pursuant to 30 TAC 335.204(b)(11) and 335.205(a)(1).

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**Table II.C. - Additional Requirements for Waste Piles [30 TAC 335.204(c)]**

Is the waste pile located or proposed to be located:

|                                                                                                                                                                                                     |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Within 1000 feet of an area subject to active coastal shoreline erosion even though the area is protected by a barrier island or peninsula?                                                         |  |
| <b>If Yes:</b> submit in Section V.E design, construction, and operational features on the facility which will prevent adverse effects resulting from storm surge and erosion or scouring by water. |  |
| Within 5000 feet of a coastal shoreline subject to active shoreline erosion and which is unprotected by a barrier island or peninsula.                                                              |  |
| <b>If Yes:</b> submit Section V.E design, construction, and operational features which will prevent adverse effects resulting from storm surge and erosion or scouring by water.                    |  |
| On a barrier island or peninsula? <sup>6</sup>                                                                                                                                                      |  |
| <b>If Yes:</b> the TCEQ shall not issue a permit for a new hazardous waste pile or an areal expansion of an existing waste pile, pursuant to 30 TAC 335.204(c)(10) and 335.205(a)(1).               |  |

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**Table II.D. - Additional Requirements for Storage Surface Impoundments [30 TAC 335.204(d)]**

Is the land treatment facility located or proposed to be located:

|                                                                                                                                                                                                                               |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Within 1000 feet of an area of active coastal shoreline erosion even though the area is protected by a barrier island or peninsula                                                                                            |  |
| <b>If Yes:</b> submit in Section V.D design, construction, and operational features of the facility which will prevent adverse effects resulting from storm surge and erosion or scouring by water.                           |  |
| Within 5000 feet of a coastal shoreline subject to active shoreline erosion and which is unprotected by a barrier island or peninsula.                                                                                        |  |
| <b>If Yes:</b> then submit in Section V.D design, construction, and operational features which will prevent adverse effects resulting from storm surge and erosion or scouring by water.                                      |  |
| On a barrier island or peninsula? <sup>6</sup>                                                                                                                                                                                |  |
| <b>If Yes:</b> the TCEQ shall not issue a permit for a new hazardous waste storage surface impoundment or an areal expansion of an existing storage surface impoundment, pursuant to 30 TAC 335.204(d)(10) and 335.205(a)(1). |  |

**Table II.E. - Additional Requirements for Landfills (and Surface Impoundments Closed as Landfills with wastes in place)**

Is the landfill located or proposed to be located:

|                                                                                                                                                                                                                                                                                                                                                                     |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Within 1000 feet of an established residence, church, school, day care center, surface water body used for a public drinking water supply, or dedicated public park which is in use at the time the notice of intent to file a permit application is filed with the commission, or which is in use at the time the permit application is filed with the commission? |  |
| <b>If Yes:</b> the TCEQ shall not issue a permit for a new hazardous waste landfill or an areal expansion of an existing landfill, pursuant to 30 TAC 335.204(e)(6) and 335.205(a)(1).                                                                                                                                                                              |  |
| (For commercial hazardous waste landfills) in the 100-year flood plain of a perennial stream that is delineated on a flood map adopted by the Federal Emergency Management Agency after September 1, 1985, as zone A1-99, VO, or V1-30?                                                                                                                             |  |
| <b>If Yes:</b> the TCEQ shall not issue a permit for a new hazardous waste landfill or an areal expansion of an existing landfill, pursuant to 30 TAC 335.204(e)(7) and 335.205(a)(1).                                                                                                                                                                              |  |
| Within 1000 feet of an area subject to active coastal shoreline erosion even though the area is protected by a barrier island or peninsula?                                                                                                                                                                                                                         |  |
| <b>If Yes:</b> then submit in Section V.G design, construction, and operational features which will prevent adverse effects resulting from storm surge and erosion or scouring by water.                                                                                                                                                                            |  |
| Within 5000 feet of a coastal shoreline subject to active shoreline erosion and which is unprotected by a barriers island or peninsula.                                                                                                                                                                                                                             |  |
| <b>If Yes:</b> then submit in Section V.G design, construction, and operational features which will prevent adverse effects resulting from storm surge and erosion or scouring by water.                                                                                                                                                                            |  |
| On a barrier island or peninsula?                                                                                                                                                                                                                                                                                                                                   |  |
| <b>If Yes:</b> the TCEQ shall not issue a permit for a new hazardous waste landfill or an areal expansion of an existing landfill, pursuant to 30 TAC 335.204(e)(12) and 335.205(a)(1).                                                                                                                                                                             |  |

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Permittee: Occidental Chemical Corporation

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**Flooding (see Section II Instructions, Item F)**

|                                                                                                                                                                                                                                                                                                                                                                                    |                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Is the facility within a 100-year flood plain?                                                                                                                                                                                                                                                                                                                                     | No             |
| Has a flood plain map been provided?                                                                                                                                                                                                                                                                                                                                               | Yes            |
| Has information about flooding levels and events, and other special flooding factors, been provided? <sup>3</sup>                                                                                                                                                                                                                                                                  | No             |
| Do any flood protection devices exist at the facility (e.g., flood walls, dikes, etc.) designed to prevent washout from the 100-year flood? <sup>3</sup>                                                                                                                                                                                                                           | Not Applicable |
| <b>If Yes:</b> provide in Section V an engineering analysis to indicate the various hydrodynamic and hydrostatic forces expected to result at the facility as a consequence of a 100-year flood. [40 CFR 270.14(b)(11)(iv)(A)] <sup>4</sup>                                                                                                                                        |                |
| <b>If No:</b> the applicant shall provide in Section V a plan for constructing flood protection devices and a schedule including specific time frames for completion. Provide engineering analyses to indicate the various hydrodynamic and hydrostatic forces expected to result at the facility as a consequence of a 100-year flood. [40 CFR 270.14(b)(11)(iv)(A)] <sup>5</sup> |                |
| If applicable, and in lieu of the flood protection devices from above, was a detailed description of the procedures to be followed to remove hazardous waste to safety before the facility is flooded provided? <sup>3, 6</sup>                                                                                                                                                    | Not Applicable |
| Additional Information Requirements (see Section II instructions, Item G): Submitted?                                                                                                                                                                                                                                                                                              |                |

1. Provide the source of information for all questions in the appendix.
2. Note: Land treatment facilities, waste piles, storage surface impoundments, and landfills may not be located on the recharge zone of a sole-source aquifer.
3. Only required to be submitted if the facility is subject to inundation as a result of a 100-year flood event.
4. Include structural or other engineering studies showing the design of operational units (e.g., tanks, incinerators) and flood protection devices (e.g., flood walls, dikes) at the facility and how these will prevent washout. [40 CFR 270.14(b)(11)(iv)(B)]
5. Include structural or other engineering studies showing the design of operational units (e.g., tanks, incinerators) and flood protection devices (e.g., flood walls, dikes) at the facility and how these will prevent washout. [40 CFR 270.14(b)(11)(iv)(B)]
6. The standards contained in §335.204(a)(6) - (9), (b)(7) - (12), (c)(6) - (11), (d)(6) - (11), and (e) (8) - (13) are not applicable to facilities that have submitted a notice of intent to file a permit application pursuant to §335.391 of this title (relating to Pre-Application Review) prior to May 3, 1988, or to facilities that have filed permit applications pursuant to §335.2(a) of this title which were submitted in accordance with Chapter 305 of this title and that were declared to be administratively complete pursuant to §281.3 of this title (relating to Initial Review) prior to May 3, 1988.[ 30 TAC 335.201(b)]



**Attachment III.**

**Facility Management**

## **Attachment III.A**

### **Compliance History and Applicant Experience**

## **Attachment III.B**

### **Training Plan**

## **Attachment III.B**

### **Training Plan**

**OxyChem**  
**Ingleside, Texas**

### **3.0 Content of RCRA Training Program**

Training is administered to two groups of individuals: (1) All Hazardous Waste Management Personnel and (2) VCM Incinerator and Drum Storage Personnel. Each is designed to provide training for specific duties according to job function and job classification. Training is conducted for individuals if their respective unit(s) were in operation during the calendar year.

All employees involved in hazardous waste management participate in an initial training course and annual refresher training. The training programs may consist of classroom, video, books and manuals, stand-up safety meetings, on-the-job classes, and/or computer-based programs. Exams are given after completion of the initial training course.

New employees must receive training within 6 months of beginning employment. In addition, inexperienced operators are not allowed to work unsupervised in the halogen acid furnace (HAF) area (including the storage tanks) and hazardous waste container storage areas until they have completed the formal training program and have passed the written exam and a verbal and demonstrative walk-through test. Immediately after completion of their qualification training, they are closely monitored by their shift supervisor, through visual observation of their work practices, for eight working days (64 working hours) as an additional training requirement.

General training outlines and specific training outlines for all waste management personnel are provided in Tables III.B-1 through III.B-3. Training outlined in Tables III.B-1 and III.B-2 is less field-oriented, with emphasis placed on understanding the process and procedures, operating and permit restrictions, safety and environmental requirements, policy guidelines, hazards, recordkeeping requirements, and emergency coordination. The Table III.B-3 training program emphasizes safe and environmentally proper operation, recordkeeping, and inspection needs, equipment operating procedures, personal safety, operating hazards, key operating parameters, cutoffs, and alarms.

#### **3.1 Introductory Training (Table III.B-1)**

The introductory training is designed to acquaint facility personnel with hazardous waste management units, management practices, and regulatory and permit requirements. Appropriate training materials are prepared and circulated among personnel to familiarize them with RCRA and the safe handling of hazardous wastes.

### **3.2 Annual Refresher Training (Table III.B-2)**

The annual training program is designed to refresh employees in the introductory training program. The annual training program will help all employees involved with hazardous waste management to maintain proficiency, to learn new techniques and procedures, to reinforce safety and quality consciousness, and to introduce any new environmental operating restrictions or requirements.

### **3.3 Periodic Training (Table III.B-3)**

Operating technicians involved with hazardous waste management complete Level 3 Training programs every three years in order to meet job-specific training needs according to job positions. These training programs cover in-depth operation of the furnaces and management of hazardous waste container storage areas. Following the completion of the training, the operating technicians take a written exam.

In addition to the formal training, the facility maintains current Standard Operating Procedures (SOPs) and Standard Operating Limits (SOLs) which are available to all hazardous waste management personnel. The SOPs and SOLs contain emergency procedures, process control narratives, permit limitations, and general process information.

Training on various safety procedures is also conducted every three years to all personnel.

### **Table III.B-3 Periodic Refresher Training Outline for VCM Incinerator Technicians and Container Storage Operators**

#### **1.0 GENERAL**

- Department safety requirements
- Hazards review
- Regulatory requirements overview for hazardous waste operation
- Satellite Accumulation Requirements
- Land Disposal Restriction standards

#### **2.0 PROCESS DESCRIPTION**

##### **2.1 HALOGEN ACID FURNACES / INDIVIDUAL PROCESS CONTROLS**

- Operating techniques
- Process flows
- Fire box
- Waste heat boiler
- Quench zone
- HCl absorber
- Dehumidifier / Caustic scrubber
- Knockout Pot / Blower / Stack
- Automatic cut-off systems / Alarm and shutdown parameters
- Pump and Blower description
- operating permit requirements

##### **2.2 TANKS / INDIVIDUAL PROCESS CONTROLS**

- Operating techniques
- Liquid waste feed
- Vent collection system
- valve locations
- Seals
- Pumps
- Operating permit requirements
- Alarms and shutdown parameters

##### **2.3 CONTAINER STORAGE AREAS**

- Drum / container management techniques
- Labeling
- Aisle space
- Containment systems



- Segregation of incompatible wastes
- Inspections

### 3.0 MAINTENANCE

- Operator responsibilities

### 4.0 SAFETY

- General department policies
- Operator responsibilities
- Hazardous substances
- Personnel protection and first aid
- Safety guidelines
- Waste segregation
- Personnel safety policies
- Work permits
- Lock/Tag/Try procedures
- Personnel protective equipment
- Hazard communications procedure
- Respiratory protection

### 5.0 ENVIRONMENTAL

- Purpose of furnaces
- Environmental operating guidelines
  - Stack emissions
  - Inspections
  - Tank inventory check
  - Drum / container management

### 6.0 EMERGENCY PROCEDURES

- Emergency equipment
- Furnace shutdown procedures
- Storage tank shutdown procedures
- Specific emergencies
  - Fire outside the firebox
  - Electrical power outage
  - Loss of HCL absorber pumps
  - loss of cooling water pumps
  - Loss of cooling water supply
  - Boiler tube leak
  - Major acid leak
  - Use, inspection, repair, and replacement of

- Alarm systems
- Automatic cut - off systems
- Communication systems

### Maintenance Manager

The Maintenance Manager is responsible for all maintenance activities at the plant. He/She reports to the Assistant Plant Manager and oversees maintenance related to Plant Outages and Maintenance budgets.

Minimum qualifications include a B.S. degree in mechanical engineering or relevant field and 5 years experience.

### Maintenance Superintendent

The Maintenance Superintendent, who reports to the Maintenance Manager, directly supervises all maintenance personnel at the plant. Minimum qualifications include a B.S. degree in mechanical engineering or relevant field and 3 years experience.

### Maintenance Personnel

Maintenance personnel are responsible for maintaining, repairing, and replacing the plant's mechanical parts, equipment, and instrumentation. They report to the Maintenance Superintendent who assigns work each day on an as-needed basis.

Minimum qualifications include a high school diploma and knowledge of mechanics and the required initial training for maintenance personnel at the plant.

### VCM Incinerator Technician

The Incinerator Technician is responsible for the hands-on operation of the halogen acid furnaces. His/Her work is directed by the Shift Supervisor.

The Incinerator Technician: 1) initiates process changes, as needed, to operate the furnaces within safe and allowable ranges; 2) monitors instrumentation and equipment to assure safe and reliable operation; 3) records required information on log sheets and forms; 4) initiates work orders to repair equipment; 5) monitors area access and writes permits for entry on work done to vessels and equipment; 6) reports and communicates the status of the process to other area operators and supervisors; 7) inspects the area and equipment as required; and 8) assists supervisors in training other operators for qualification in this area.

- Monitors all transfers of containers into and out of the areas.

Minimum qualifications include a high school diploma and completion of the initial RCRA training program followed by refresher training.

Table III.B-4 summarizes the training requirements for each of the hazardous waste management personnel listed above.

**Table III.B-4 Hazardous Waste Management Personnel**

| <b><u>Job Title</u></b>                                       | <b><u>Required<br/>Introductory<br/>Training</u></b> | <b><u>Required<br/>Annual<br/>Training</u></b> | <b><u>Required<br/>Periodic<br/>Training</u></b> |
|---------------------------------------------------------------|------------------------------------------------------|------------------------------------------------|--------------------------------------------------|
| Plant Manager                                                 | Table III.B-1                                        | Table III.B-2                                  |                                                  |
| Assistant Plant Manager                                       | Table III.B-1                                        | Table III.B-2                                  |                                                  |
| Safety Manager                                                | Table III.B-1                                        | Table III.B-2                                  |                                                  |
| Environmental Manager                                         | Table III.B-1                                        | Table III.B-2                                  |                                                  |
| Environmental Superintendent                                  | Table III.B-1                                        | Table III.B-2                                  |                                                  |
| Environmental Engineer(s)                                     | Table III.B-1                                        | Table III.B-2                                  |                                                  |
| VCM Environmental Supervisor                                  | Table III.B-1                                        | Table III.B-2                                  |                                                  |
| Plant Training Supervisor                                     | Table III.B-1                                        | Table III.B-2                                  |                                                  |
| VCM Operations Manager                                        | Table III.B-1                                        | Table III.B-2                                  |                                                  |
| Operations Superintendent, Shift, and<br>Day Area Supervisors | Table III.B-1                                        | Table III.B-2                                  |                                                  |
| Maintenance Manager                                           | Table III.B-1                                        | Table III.B-2                                  |                                                  |
| Maintenance Superintendent                                    | Table III.B-1                                        | Table III.B-2                                  |                                                  |
| Maintenance Personnel                                         | Table III.B-1                                        | Table III.B-2                                  |                                                  |
| VCM Incinerator Technician                                    | Table III.B-1<br>Table III.B-3                       | Table III.B-2                                  | Table III.B-3                                    |
| VCM Container Storage Technician                              | Table III.B-1<br>Table III.B-3                       | Table III.B-2                                  | Table III.B-3                                    |

## **Attachment III.C**

### **Security**

## **Attachment III.D**

### **Inspection Schedule**

## **Attachment III.E**

### **Contingency Plan**

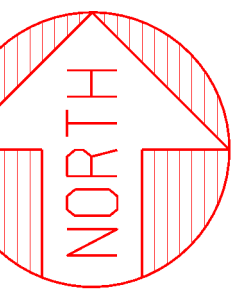


**Table III.E.2 - Emergency Coordinators**

| Name                    | Home Address                                                              | Office Phone(s)<br>and/or Pager | Home Phone(s)  |
|-------------------------|---------------------------------------------------------------------------|---------------------------------|----------------|
| Primary                 |                                                                           |                                 |                |
| Primary Darren Rudowsky | Safety Superintendent<br>6317 Legacy Point<br>Corpus Christi, TX<br>78414 | (361) 775-7274                  | (361) 929-6690 |

| Name                       | Home Address                                                                | Office Phone(s)<br>and/or Pager | Home Phone(s)  |
|----------------------------|-----------------------------------------------------------------------------|---------------------------------|----------------|
| Alternate William Griffith | Assistant Plant<br>Manager<br>106 Alta Plaza<br>Corpus Christi, TX<br>78411 | (361) 776-6168                  | (205) 587-6929 |
| Alternate                  |                                                                             |                                 |                |
| Alternate Adam Brewer      | Assistant Plant<br>Manager<br>176 James Road<br>Tivoli, TX 77990            | (361) 776-6161                  | (361) 222-9023 |





U.S. HWY 361

COUNTY RD 93

FURNACES  
CCIN-1 & CCIN-2 &  
TANKS C-720A & C-720B  
(ACTIVE)

VCM CONTAINER  
STORAGE AREA  
(ACTIVE)

WASTE WATER SLUDGE  
CONTAINER STORAGE  
AREA (CLOSED)

TANK 6D-02 (CLOSED)

AIR LIQUIDE

DUPONT

CHLOR-ALKALI  
CONTAINER STORAGE  
AREA (CLOSED)

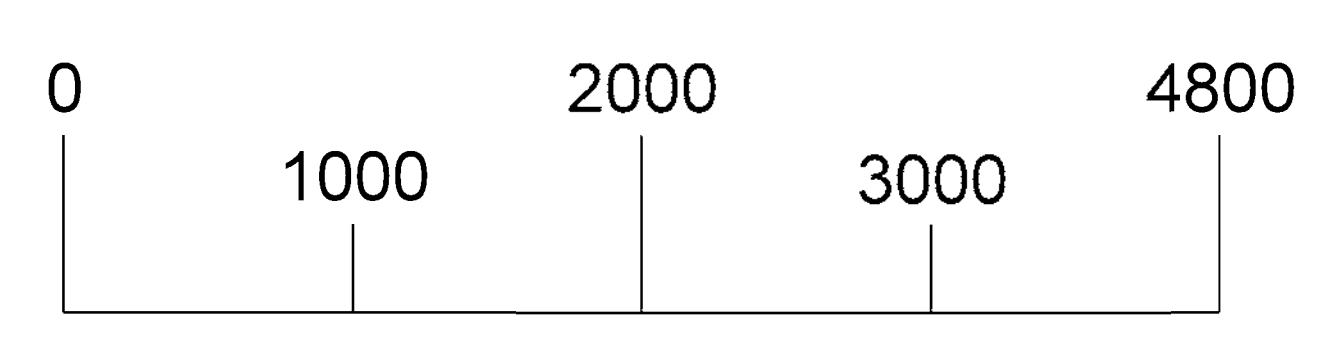
DUPONT

CORPUS CHRISTI BAY

CITY OF  
INGLESIDE

EMERGENCY RESPONSE FACILITY  
- FIRE TRUCKS  
- SPILL RESPONSE EQUIPMENT  
- EMERGENCY RESPONSE PPE

EMERGENCY EQUIPMENT LOCATION MAP



SCALE: 1" = 2000'-0"



## **Attachment IV.**

### **Wastes and Waste Analysis**

## **Attachment IV.B**

### **Wastes Managed in Permitted Units**

**Table IV.B. – Wastes Managed In Permitted Units**

| No. | Waste                                                    | EPA Hazardous Waste Numbers                                                                    | TCEQ Waste Form Codes and Classification Codes |
|-----|----------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------|
| 1   | Oil and/or Solvent Contaminated Solids (including soils) | D028, D040, D043, F001, F003, K019, K020, U043, U077                                           | 0106489H<br>0108407H<br>0241301H<br>0301301H   |
| 2   | Spent Paint Thinner                                      | D001, D035, F003, F005                                                                         | 0117211H                                       |
| 3   | Waste Paint Solids                                       | F003, F005                                                                                     | 0133409H                                       |
| 4   | Waste Oil                                                | D001, D028, D040, F001, F002                                                                   | 0136206H                                       |
| 5   | Waste Resin, Sealant, or Varnish                         | D001, D003, F003                                                                               | 0138219H<br>0140209H<br>0196409H               |
| 6   | Fuel Oil Contaminated Water                              | D001, D018                                                                                     | 0177205H                                       |
| 7   | Spent Carbon Canisters and Can Residue                   | D001, D035, D040, F003                                                                         | 0190404H<br>0192204H<br>0196409H               |
| 8   | Biosolids                                                | F001, F003, F005, F025, K019, K020                                                             | 0228491H                                       |
| 9   | Reboiler Scale                                           | D007, D019, D022, D028, D032, D040                                                             | 0229407H                                       |
| 10  | EDC Contaminated Material                                | D028, F024                                                                                     | 0238319H                                       |
| 11  | Incinerator Ash/Brick                                    | F001, F003, F005, F025, K019, K020                                                             | 0242303H<br>0243319H                           |
| 12  | VCM Furnace Coke                                         | D001, D006, D007, D028, D043                                                                   | 0244407H                                       |
| 13  | Spent Catalyst                                           | D028, F001, F003, F005, F025, K019, K020                                                       | 0246393H<br>0298393H                           |
| 14  | VCM Trench Material                                      | D028, D043, K019, K020, U077                                                                   | 0247319H                                       |
| 15  | VCM Heavy Ends*                                          | D001, D007, D019, D021, D022, D027, D028, D029, D032, D033, D034, D036, D039, D040, K019, K020 | 0248219H<br>219H<br>202H                       |
| 16  | VCM Contaminated Filters/Carbon                          | D043, F025                                                                                     | 0249310H<br>0250404H                           |
| 17  | VCM Light Ends*                                          | D001, D018, D019, D022, D028, D029, D040, F025                                                 | 0251219H<br>219H                               |
| 18  | Limestone Sludge                                         | F001, F003, F005, F025, K019, K020                                                             | 0253306H                                       |
| 19  | Rockbox Residue                                          | F001, F003, F005, F025, K019, K020                                                             | 0255319H                                       |
| 20  | Mother Liquor                                            | D001, K019, K020                                                                               | 0258219H                                       |
| 21  | Incinerator Flue Gas Scale                               | F001, F003, F005, F025, K019, K020                                                             | 0289303H                                       |

| No. | Waste                             | EPA Hazardous Waste Numbers                                      | TCEQ Waste Form Codes and Classification Codes |
|-----|-----------------------------------|------------------------------------------------------------------|------------------------------------------------|
| 22  | VCM Incinerator Acid              | D002, F001, F003, F005, F025, K019, K020                         | 0293105H                                       |
| 23  | EDC Heavy Ends*                   | D001, D002, D021, D022, D027, D028, D034, D036, D039, D040, K019 | 0339219H<br>219H<br>204H                       |
| 24  | Chlorine Butter, Solids, Elements | D019, D022, D032, D034, D037, D039, D040, D042                   | 0406609H<br>0405403H<br>0411319H               |
| 25  | Natural Gas Condensate            | D009, D018                                                       | 0504219H                                       |
| 26  | Wastewater Solids/Sand            | F001, F003, F005, F025, K019, K020                               | 0276407H<br>0294319H                           |
| 27  | Other Inorganic Waste             | Various                                                          | Various                                        |
| 28  | Other Organic Waste               | Various                                                          | Various                                        |

\* - Wastes received from off-site sources.

## **Attachment IV.C**

### **Sampling and Analytical Methods**



**Table IV.C. – Sampling and Analytical Methods**

| Waste No. <sup>1</sup> | Sampling Location                                 | Sampling Method <sup>2</sup> | Frequency              | Parameter                                              | Test Method <sup>2</sup>                           | Desired Accuracy Level <sup>3</sup>            |
|------------------------|---------------------------------------------------|------------------------------|------------------------|--------------------------------------------------------|----------------------------------------------------|------------------------------------------------|
| 1                      | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 2                      | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 3                      | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 4                      | Sample taps at waste feed loops and/or feed lines | Grab                         | Annual <sup>4</sup>    | Ash<br>Hg<br>As, Be, Cd, Cr, Pb<br>Cl <sub>2</sub> /Cl | ASTM D482<br>EPA 7470<br>EPA 6010/6020<br>EPA 9056 | 0.02 Wt%<br>5 mg/Kg<br>5 mg/Kg<br>15,000 mg/Kg |
| 5                      | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 6                      | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 7                      | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 8                      | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 9                      | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |

| Waste No. <sup>1</sup> | Sampling Location                                 | Sampling Method <sup>2</sup> | Frequency              | Parameter                                              | Test Method <sup>2</sup>                           | Desired Accuracy Level <sup>3</sup>            |
|------------------------|---------------------------------------------------|------------------------------|------------------------|--------------------------------------------------------|----------------------------------------------------|------------------------------------------------|
| 10                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 11                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 12                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 13                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 14                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 15                     | Sample taps at waste feed loops and/or feed lines | Grab                         | Annual <sup>4</sup>    | Ash<br>Hg<br>As, Be, Cd, Cr, Pb<br>Cl <sub>2</sub> /Cl | ASTM D482<br>EPA 7470<br>EPA 6010/6020<br>EPA 9056 | 0.02 Wt%<br>5 mg/Kg<br>5 mg/Kg<br>15,000 mg/Kg |
| 16                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 17                     | Sample taps at waste feed loops and/or feed lines | Grab                         | Annual <sup>4</sup>    | Ash<br>Hg<br>As, Be, Cd, Cr, Pb<br>Cl <sub>2</sub> /Cl | ASTM D482<br>EPA 7470<br>EPA 6010/6020<br>EPA 9056 | 0.02 Wt%<br>5 mg/Kg<br>5 mg/Kg<br>15,000 mg/Kg |
| 18                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |

| Waste No. <sup>1</sup> | Sampling Location                                 | Sampling Method <sup>2</sup> | Frequency              | Parameter                                              | Test Method <sup>2</sup>                           | Desired Accuracy Level <sup>3</sup>            |
|------------------------|---------------------------------------------------|------------------------------|------------------------|--------------------------------------------------------|----------------------------------------------------|------------------------------------------------|
| 19                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 20                     | Sample taps at waste feed loops and/or feed lines | Grab                         | Annual <sup>4</sup>    | Ash<br>Hg<br>As, Be, Cd, Cr, Pb<br>Cl <sub>2</sub> /Cl | ASTM D482<br>EPA 7470<br>EPA 6010/6020<br>EPA 9056 | 0.02 Wt%<br>5 mg/Kg<br>5 mg/Kg<br>15,000 mg/Kg |
| 21                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 22                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 23                     | Sample taps at waste feed loops and/or feed lines | Grab                         | Annual <sup>4</sup>    | Ash<br>Hg<br>As, Be, Cd, Cr, Pb<br>Cl <sub>2</sub> /Cl | ASTM D482<br>EPA 7470<br>EPA 6010/6020<br>EPA 9056 | 0.02 Wt%<br>5 mg/Kg<br>5 mg/Kg<br>15,000 mg/Kg |
| 24                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 25                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 26                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |
| 27                     | Container                                         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization              | Various                                            | As per analytical methods                      |

| Waste No. <sup>1</sup> | Sampling Location | Sampling Method <sup>2</sup> | Frequency              | Parameter                                 | Test Method <sup>2</sup> | Desired Accuracy Level <sup>3</sup> |
|------------------------|-------------------|------------------------------|------------------------|-------------------------------------------|--------------------------|-------------------------------------|
| 28                     | Container         | Grab                         | As needed <sup>5</sup> | Those required for waste characterization | Various                  | As per analytical methods           |

<sup>1</sup> From Table IV.B, first column

<sup>2</sup> Sampling and Test/Analysis methods should be specified in enough detail to allow determination of whether they are suitable and correct for the purpose indicated while allowing flexibility in selection and future updates to the specified method. Standard methods, such as those from SW-846, will generally require no further submittal. Non-standard and proprietary methods may require additional information to determine suitability. ASTM methods may require submittal of a copy of the specified method.

<sup>3</sup> Desired Accuracy Level should provide a specified numeric minimum performance level (maximum acceptable reporting limit) for method detection and quantitation limits that will be accepted from the laboratory performing the analysis and must ensure that reported data will allow determinations of compliance with regulatory limits for the parameter tested.

<sup>4</sup> – Only if waste stream is managed in HAFs CCIN-1 and/or CCIN-2 during the calendar year.

<sup>5</sup> – Based on process knowledge.

## **Attachment IV.D**

### **Waste Analysis Plan**

**Attachment IV.D**

**Waste Analysis Plan**

**OxyChem**  
**Ingleside, Texas**

## **1.0 Introduction**

This waste analysis and sampling plan describes the analytical methods which will be followed by OxyChem's Ingleside plant to ensure that hazardous wastes generated at the plant are managed in an environmentally appropriate manner.

This plan has been developed to comply with federal RCRA regulations contained in 40 CFR 264.13 and 266.102(a)(2)(ii) and 30 TAC Chapter 335.152. The cited regulations state that detailed chemical and physical analysis of a representative sample of the waste must be obtained which will, at a minimum, contain all of the information needed to treat, store, or dispose of the waste. The regulations further state that the detailed analyses will be repeated as necessary to ensure that the waste characteristics remain accurate and up-to-date with any process changes that may materially affect waste characteristics.



## **2.0 Description of Hazardous Waste Management Units**

OxyChem's Ingleside, Texas plant operates two identical halogen acid furnaces (HAFs), CCIN-1 and CCIN-2. These furnaces are an integral part of the vinyl chloride monomer (VCM) process units. They are used for the control of volatile organic compound (VOC) emissions from process operations and for the destruction of liquid hazardous wastes generated onsite and from three (3) off-site OxyChem sites.

The two HAF units were originally regulated as incinerators under the RCRA regulations. Effective September 11, 2003, these units became subject to the Hazardous Waste Combustor (HWC) MACT regulations of 40 CFR Part 63, Subpart EEE. During the 2014 and 2015 Part B Permit Renewal process, the units were properly reclassified as HAFs under the RCRA regulations.

Prior to combustion in the HAF units, liquid hazardous waste streams are stored in two tanks, C-720A and C-720B. Occasionally, the wastes stored in these tanks are sent for off-site treatment.

Hazardous wastes that cannot be combusted in the HAFs are containerized for off-site treatment and/or disposal. The containerized wastes are stored on-site in the VCM Container Storage Area or other authorized waste management units.

This Waste Analysis Plan (WAP) is required for the treatment and storage of hazardous wastes at the facility. The HWC MACT regulations require a Feedstream Analysis Plan (FAP). As such, any analyses of the hazardous wastes treated in the HAFs are described in the FAP. Therefore, this WAP outlines the plans for sampling and analyzing the waste streams that are stored onsite and/or shipped offsite.

### 3.0 Waste Description

Currently, the plant manages several hazardous waste streams registered with the TCEQ which have been or may be generated onsite or received from offsite. These wastes may be treated in the CCIN-1 and CCIN-2 HAFs or shipped offsite for disposal or treatment. These wastes are identified in Table 3-1.

**Table 3-1 Hazardous Waste List**

| <b>Waste Description</b>               | <b>EPA Waste Code(s)</b>                             | <b>TCEQ Waste Code(s)</b>                    |
|----------------------------------------|------------------------------------------------------|----------------------------------------------|
| Oil and/or Solvent Contaminated Solids | D028, D040, D043, F001, F003, K019, K020, U043, U077 | 0106489H<br>0108407H<br>0241301H<br>0301301H |
| Spent Paint Thinner                    | D001, D035, F003, F005                               | 0117211H                                     |
| Waste Paint Solids                     | F003, F005                                           | 0133409H                                     |
| Waste Oil                              | D001, D028, D040, F001, F002                         | 0136206H                                     |
| Waste Resin, Sealant, or Varnish       | D001, D003, F003                                     | 0138219H<br>0140209H<br>0196409H             |
| Fuel Oil Contaminated Water            | D001, D018                                           | 0177205H                                     |
| Spent Carbon Canisters and Can Residue | D001, D035, D040, F003                               | 0190404H<br>0192204H<br>0196409H             |
| Biosolids                              | F001, F003, F005, F025, K019, K020                   | 0228491H                                     |
| Reboiler Scale                         | D007, D019, D022, D028, D032, D040                   | 0229407H                                     |
| EDC Contaminated Material              | D028, F024                                           | 0238319H                                     |
| Incinerator Ash/Brick                  | F001, F003, F005, F025, K019, K020                   | 0242303H<br>0243319H                         |
| VCM Furnace Coke                       | D001, D006, D007, D028, D043                         | 0244407H                                     |
| Spent Catalyst                         | D028, F001, F003, F005, F025, K019, K020             | 0246393H<br>0298393H                         |
| VCM Trench Material                    | D028, D043, K019, K020, U077                         | 0247319H                                     |

**Table 3-1 Hazardous Waste List (continued)**

| <b>Waste Description</b>          | <b>EPA Waste Code(s)</b>                                                                                | <b>TCEQ Waste Code(s)</b>        |
|-----------------------------------|---------------------------------------------------------------------------------------------------------|----------------------------------|
| VCM Heavy Ends*                   | D001, D007, D019, D021,<br>D022, D027, D028, D029,<br>D032, D033, D034, D036,<br>D039, D040, K019, K020 | 0248219H<br>219H<br>202H         |
| VCM Contaminated Filter/Carbon    | F025, D043                                                                                              | 0249310H<br>0250404H             |
| VCM Light Ends*                   | D001, D018, D019, D022,<br>D028, D029, D040, F025                                                       | 0251219H<br>219H                 |
| Limestone Sludge                  | F001, F003, F005, F025,<br>K019, K020                                                                   | 0253306H                         |
| Rockbox Residue                   | F001, F003, F005, F025,<br>K019, K020                                                                   | 0255319H                         |
| Mother Liquor                     | D001, K019, K020                                                                                        | 0258219H                         |
| Incinerator Flue Gas Scale        | F001, F003, F005, F025,<br>K019, K020                                                                   | 0289303H                         |
| VCM Incinerator Acid              | D002, F001, F003, F005,<br>F025, K019, K020                                                             | 0293105H                         |
| EDC Heavy Ends*                   | D001, D002, D021, D022,<br>D027, D028, D034, D036,<br>D039, D040, K019                                  | 0339219H<br>219H<br>204H         |
| Chlorine Butter, Solids, Elements | D019, D022, D032, D034,<br>D037, D039, D040, D042                                                       | 0406609H<br>0405403H<br>0411319H |
| Natural Gas Condensate            | D009, D018                                                                                              | 0504219H                         |
| Wastewater Solids/Sand            | F001, F003, F005, F025,<br>K019, K020                                                                   | 0276407H<br>0294319H             |
| Other Inorganic Waste             | Various                                                                                                 | Various                          |
| Other Organic Waste               | Various                                                                                                 | Various                          |

\* - This hazardous waste stream may be received from offsite sources.

## **4.0 Waste Analysis**

Wastes will be analyzed for characterization purposes so that they may be properly managed. The waste characteristics for the hazardous waste streams presently generated at the OxyChem plant are reviewed and analyzed as needed. The analytical data is maintained onsite.

### **4.1 Analysis of Waste Streams**

All of the wastes identified in Table 3-1 are candidates for on-site storage and/or off-site treatment/disposal at an authorized TSDF. Five of the waste streams identified in Table 3-1 (i.e., EDC heavy ends, VCM heavy ends, VCM light ends, mother liquor, and waste oil) may be combusted onsite in the HAF units. Analyses of the waste streams designated for on-site storage and/or off-site shipment will be performed, if necessary, in order to adequately classify these streams. In addition, they will be analyzed for those parameters required by the off-site facility accepting the waste streams.

Waste analysis requirements for specific waste management methods are conducted pursuant to 40 CFR 264.17 (ignitable, reactive, or incompatible waste), 40 CFR Section 264.314 (bulk and containerized liquids), and 40 CFR Section 268.7 (land disposal restrictions). For ignitable waste, OxyChem assumes the ignitability hazard is present based on laboratory analyses and process knowledge. Therefore, all off-site shipments of these wastes are designated as ignitable and flammable. OxyChem relies upon knowledge of current processes in determining that reactive wastes are not currently generated.

With respect to bulk and containerized liquids, OxyChem's procedures require that: 1) a waste container cannot contain free liquids unless the entire contents are characterized as a liquid; and 2) sufficient absorbent is added to sludge-like waste to ensure that liquids are not present. In addition, the paint filter test is periodically conducted on selected off-site shipments to verify the absence of free liquids. With respect to the land disposal restrictions, OxyChem conducts the necessary analysis (e.g., TCLP, etc.) to ensure that the waste is properly characterized and that proper TCEQ and USEPA waste codes are assigned. This information enables OxyChem to properly complete the shipping manifest and the land disposal restriction notification for each waste shipment.

## 4.2 Analytical Methods

Testing may be performed by an independent laboratory or OxyChem's on-site plant laboratory using the analytical methods specified in Table 4-1. Methods are generally those specified in EPA Manual SW-846, or in some cases where SW-846 does not address the parameter, another appropriate reference method is used (e.g., ASTM, etc.).

**Table 4-1 Analytical Methods**

| Parameter                                                                   | Method Type                                                  | Method Number | References |
|-----------------------------------------------------------------------------|--------------------------------------------------------------|---------------|------------|
| Appearance                                                                  | Description of Waste, i.e., color, consistency, odor, phases | N/A           | N/A        |
| Specific Gravity/<br>Density                                                | Weight compared to water                                     | D1429 / D1429 | ASTM       |
| Ash                                                                         | Gravimetric                                                  | D482          | ASTM       |
| Viscosity                                                                   | Saybolt or Cannon Fenske<br>Viscosimeter                     | D445          | ASTM       |
| Heating Value                                                               | Bomb Calorimeter                                             | D240          | ASTM       |
| Total Organic Halides                                                       | Oxidative                                                    | 9076          | SW-846     |
|                                                                             | Combustion                                                   |               |            |
|                                                                             | Coulometric                                                  |               |            |
|                                                                             | Titration                                                    |               |            |
| Organics:<br>Volatiles<br>Semivolatiles                                     | GC/MS                                                        | 8260          | SW-846     |
|                                                                             | GC/MS                                                        | 8270          | SW-846     |
| Mercury                                                                     | CVAAS                                                        | 7470/7471     | SW-846     |
|                                                                             | CVAAS                                                        | 245.1         | EPA        |
|                                                                             | ICP-AES                                                      | 200.7         | EPA        |
| Metals:<br>Arsenic, Barium,<br>Cadmium, Chromium,<br>Lead, Selenium, Silver | ICP                                                          | 6010          | SW-846     |

### REFERENCES:

- ASTM: Annual Book of ASTM Standards, Petroleum Products, Lubricants, and Fossil Fuels, American Society for Testing and Materials
- SW-846: Test Methods for Evaluating Solid Waste, SW-846, USEPA

### 4.3 Analytical Quality Assurance

The quality of the waste analyses will be assured by performing the appropriate laboratory quality control (QC) procedures. The plant Environmental Group, in conjunction with the plant laboratory supervisor, will ensure that the laboratory performing the analyses follows appropriate QC procedures. Example of appropriate procedures, for illustrative purposes, includes:

1. Use of EPA-acceptable sample preparation and analytical methods, as specified by the analytical procedure.
2. Calibration of laboratory instruments to within acceptable limits according to EPA or manufacturer's specifications before, after, and during (as appropriate) use. Reference standards must be used when necessary.
3. Periodic inspection, maintenance, and necessary service of all laboratory instruments and equipment.
4. The use of reference standards and QC samples (e.g., checks, spikes, laboratory blanks, duplicates, splits, etc.) as necessary to determine the accuracy and precision of procedures, instruments, and operators.
5. The use of adequate statistical procedures (e.g., QC charts, etc.) to monitor the precision and accuracy of the data and to establish acceptable limits.
6. The continuous review of results to identify and correct problems within the measurement system (e.g., instrumentation problems, inadequate operator training, inaccurate measurement techniques, etc.).
7. Documenting the performance of systems and operators.
8. Regular participation in external laboratory evaluations (including the EPA Performance Audit Program) to determine accuracy and overall performance of the laboratory. This should include performance evaluation and interlaboratory comparison studies, and formal field unit/laboratory evaluation and inspections.
9. Use of acceptable sample identification and, as necessary, formal chain-of-custody procedures in the laboratory.
10. Maintenance and storage of records, charts, and logs of all pertinent laboratory calibration, analytical, and QC activities and data.
11. Ensuring data outputs are presented in the prescribed format.

Further, the quality assurance program will include the requirements outlined in the TCEQ's "Quality Assurance Project Plan for Environmental Monitoring and Measurement Activities Relating to the Resource Conservation and Recovery Act and Underground Injection Control".

## **5.0 Waste Sampling**

Sampling methods may vary depending on the location (accessibility), form, and consistency of the particular waste. All sampling methods are based upon those specified in EPA Manual SW-846. The objective of sample collection is to obtain waste samples for analysis which are descriptive of the waste's average composition over time and/or spatial distribution.

Sample collection procedures are described according to the type of unit in which the waste is contained.

### **5.1 Sampling Methods**

#### **Containers**

Liquid samples from drums will be obtained using a Coliwasa (SW-846) or glass tube (approximately ½-inch diameter by 3-feet long). The tube will be lowered through the bung down to the bottom of the drum, stoppered, and then pulled out. Each grab sample will be poured into a clean glass jar. It may take several grab samples to fill a jar.

For drums containing solid or granular waste materials, a Trier or elongated scoop (SW- 846) will be inserted in the drum or barrel to remove a "core" of waste. The sample procedures for selecting the number of drums to be sampled, and amount of sample to be collected, are the same as procedures followed for liquid drum samples.

#### **Tanks**

Liquid samples associated with the storage tanks, including offsite shipments of materials from the storage tanks, is performed using a sample tap on the piping associated with the tanks. The sample tap is flushed with, at a minimum, the volume of the tap prior to collection of the sample.

#### **General**

Prevention of cross contamination of waste samples is critical to the quality of the analytical results. Whenever possible, disposable (which is disposed of after each use) or dedicated sampling equipment (which remains at the same sampling location) is used to eliminate the possibility of cross contamination. When appropriate, certified clean containers will be used to collect samples. However, when it is impractical to use disposable sampling equipment, sampling equipment is decontaminated between collections of individual sampling events using a combination of industrial detergent, solvent, and/or distilled water.



## **5.2 Sample Preservation**

Samples will be stored pursuant to the appropriate SW-846 procedures or specific procedures outlined in the analytical method. All samples will be analyzed within the time frame specified by the designated method.

## **5.3 Chain-of-Custody and Sample Labeling**

All hazardous waste samples collected will be labeled and accompanied by a chain-of-custody form. The label will state the sampler's name, date, sample number, and location and will be permanently attached to the sample container. The sample label will also specify the parameters to be analyzed and the hazards associated with the sample, where appropriate. The chain-of-custody will document sample possession from the time of collection to time of delivery of the samples to the transporter and from transporter delivery to the laboratory through final analyses. The receiving laboratory will verify that the sample transported by the transporter have not been damaged, broken, or tampered with (i.e., missing seals).

## **5.4 Sample Quality Assurance**

The quality of the sampling program has a direct bearing on how representative the samples are of the waste stream. In order to ensure sampling integrity, the sampling procedures just outlined will be strictly followed. These procedures include sample collection, sample preservation, and chain-of-custody. The sampling operations will be supervised by a person thoroughly familiar with both the sampling and analytical techniques. Special precautions will be followed:

1. When selecting the appropriate sampling device;
2. To prevent cross-contamination of samples; and
3. When using non-routine sampling procedures.

**Attachment V.**

**Engineering Reports**

**Table V.A. – Facility Waste Management Handling Units**

| TCEQ Permit Unit No. <sup>1</sup> | Unit Name                           | NOR No. <sup>1</sup> | Unit Description <sup>3</sup>                                                                                                                             | Capacity       | Unit Status <sup>2</sup> |
|-----------------------------------|-------------------------------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------------|
| 1                                 | CCIN-1                              | 065                  | Halogen acid furnace, horizontal flow, liquid hazardous waste industrial furnace consisting of a firebox (combustion zone) and waste heat boiler.         | 5,500 lb/hr    | Active                   |
| 2                                 | CCIN-2                              | 066                  | Halogen acid furnace, horizontal flow, liquid hazardous waste industrial furnace consisting of a firebox (combustion zone) and waste heat boiler.         | 5,500 lb/hr    | Active                   |
| 3                                 | WW Sludge Container Storage Area    | 048                  | Container storage area, 60-ft by 60-ft area with no secondary containment                                                                                 | 32,318 gallons | Closed                   |
| 4                                 | Chlor-Alkali Container Storage Area | 006                  | Container storage area, 63-ft by 18-ft paved and curbed foundation covered by roof and surrounded by 3 walls, designed to store 80 55-gallon containers.  | 4,400 gallons  | Closed                   |
| 5                                 | VCM Container Storage Area          | 022                  | Container storage area, 41-ft by 21-ft paved and curbed foundation covered by roof and surrounded by 4 walls, designed to store 168 55-gallon containers. | 9,240 gallons  | Active                   |
| 6                                 | C-720A                              | 023                  | Tank, elevated steel sphere, diameter of 26-feet, feed tank for the halogen acid furnaces.                                                                | 65,000 gallons | Active                   |
| 7                                 | C-720B                              | 082                  | Tank, elevated steel sphere, diameter of 26-feet, feed tank for the halogen acid furnaces.                                                                | 65,000 gallons | Active                   |
| 8                                 | 6D-02                               | 081                  | Tank                                                                                                                                                      | 37,700 gallons | Closed                   |

1. Permitted Unit No. and NOR No. cannot be reassigned to new units or used more than once and all units that were in the Attachment D of a previously issued permit must be listed.

2. Unit Status Options: Active, Closed, Inactive (built but not managing waste), Proposed (not yet built), Never Built, Transferred, Post-Closure.

3. If a unit has been transferred, the applicant should indicate which facility/permit it has been transferred to in the Unit Description column of Table V.A.

**Attachment V.A**

**General Information Report**

## **Attachment V.A**

### **General Information Report**

**OxyChem**  
**Ingleside, Texas**



ATLAS TECHNICAL CONSULTANTS LLC  
15740 Park Row Drive, Suite 200  
Houston, TX 77084  
TBPE Firm Registration No. - F-19813

## **Figures**

|          |                                 |
|----------|---------------------------------|
| Figure 1 | USGS Map                        |
| Figure 2 | Wind Rose – 2020-2024           |
| Figure 3 | Fences and Gates                |
| Figure 4 | Sole Source Aquifers of Texas   |
| Figure 5 | Major Aquifers of Texas         |
| Figure 6 | Faults of Texas                 |
| Figure 7 | Faults in Proximity to Facility |

## **Appendices**

|            |                         |
|------------|-------------------------|
| Appendix A | Water Well Report       |
| Appendix B | Soil Report             |
| Appendix C | Flood Maps              |
| Appendix D | NOAA Precipitation Data |

## 1.0 Introduction

OxyChem owns and operates a chemical plant near Ingleside in San Patricio County, Texas. The OxyChem facility produces ethylene dichloride (EDC), vinyl chloride monomer (VCM), chlorine, and caustic soda. In addition to the production processes, OxyChem owns and operates hazardous waste management units subject to RCRA permitting requirements. As such, the facility stores hazardous wastes for subsequent treatment onsite via combustion and for shipment offsite for treatment and disposal. Figure 1 presents an overall plan view of the facility and identifies the locations of the hazardous waste management units.

As shown in Figure 1, the hazardous waste storage tanks (Tanks C-720A and C-720B) and hazardous waste Halogen Acid Furnaces (HAFs) (CCIN-1 and CCIN-2) are located approximately 2,000 feet from the nearest boundary and approximately 2,500 feet from the nearest public roadway (State Highway 361). In addition, the VCM container storage area is located over 500 feet from the nearest property boundary and over 2,000 feet from State Highway 361. In addition, incompatible wastes are not stored in the VCM container storage area. Therefore, the facility has provided adequate buffer zones and segregation for the hazardous waste streams managed at the facility.

This report provides general information regarding the location of the facility and preparedness and prevention as it relates to permitted hazardous waste management units to address the following general facility requirements:

- General requirements for ignitable, reactive, or incompatible waste per 40 CFR 264.17;
- Location standards of 40 CFR 264.18 and 30 TAC 335.204;
- Preparedness and prevention requirements of 40 CFR Part 264, Subpart C with the exception of 264.37, which is addressed in the Contingency Plan; and
- Section I.E of the TCEQ Part B Application Form.



## 2.0 Facility Location

The OxyChem facility is situated in San Patricio County in Ingleside, Texas. The facility is located between Corpus Christi Bay and State Highway 361 at a location approximately three miles southeast of Gregory, Texas. Adjacent land use consists primarily of industrial and undeveloped.

Several figures are presented in order to meet the information requirements specified in 40 CFR 270.14(b)(19), 270.14(c)(3), and 270.14(d)(1)(i). Figure 1 includes the following information:

- Map scale and date;
- Surface waters, including intermittent streams;
- Surrounding land uses (residential, commercial, agricultural, recreational);
- Orientation of the map (north arrow);
- Legal boundaries of the HWM facility site;
- Buildings, TSD operations, and other structures;
- Barriers for drainage of flood control; and
- Operational units within the HWM facility site where hazardous waste is treated, stored, or disposed.

In addition to Figure 1, the following items are also included in this report:

- Figure 2 - Wind rose map for 2020 through 2024;
- Figure 3 - Facility fences and gates;
- Figure 4 - Sole source aquifers of Texas;
- Figure 5 – Major Aquifers of Texas;
- Figure 6 – Faults of Texas;
- Figure 7 – Faults in proximity to the facility;
- Appendix A - Water well report;
- Appendix B – Soil report;
- Appendix C – Flood maps; and
- Appendix D – NOAA Precipitation Data.

The following sections address the unsuitable site characteristics specified in 30 TAC 335.204. Unsuitable site characteristics include the following:

- Located in wetlands;
- Located in critical habitat of an endangered species;

- Located in the recharge zone of a sole-source aquifer;
- Located in an area overlying a regional aquifer;
- Located in areas with certain soil types;
- Located in an area of direct drainage within one-mile of a lake used for public drinking water;
- Located in an area of active geologic processes;
- Located near a geologic fault; and
- Located in a 100-year floodplain.

## **2.1 Wetlands**

Pursuant to 30 TAC 335.204(a)(2), storage or processing facilities may not be located in areas with wetlands. There are no wetlands at the OxyChem facility. The facility is situated within an industrial property in Ingleside, Texas. As evident from the USGS Map (Figure 1), facility areas are relatively flat, with no significant water storage features and/or vegetative cover. The areas are developed (i.e., paved and equipped with structures/equipment) and no natural water features are present at the facility.

## **2.2 Critical Habitat**

Pursuant to 30 TAC 335.204(a)(8), storage or processing facilities may not be located in the critical habitat of an endangered species of plant or animal unless the design, construction, and operational features of the facility will prevent adverse effects on the critical habitat of the endangered species. OxyChem is not aware of any critical habitat of an endangered species of plant or animal within the property boundaries. Therefore, no critical habitats have been identified at the facility.

## **2.3 Sole Source Aquifer**

Pursuant to 30 TAC 335.204(a)(3), storage or processing facilities may not be located on the recharge zone of a sole-source aquifer unless secondary containment is provided to preclude migration to groundwater from spills, leaks, or discharges. The U.S. Environmental Protection Agency has designated the Edwards Aquifer as the only sole source aquifer in the State of Texas. As shown in Figure 4, the Edwards Aquifer is located in Central Texas from Austin to San Antonio and westward. Therefore, the OxyChem facility is not located in the recharge zone of a sole source aquifer.

prevent hazards during loading/unloading operations. Storage tanks are equipped with hard piping between tanks such that unloading operations are not typically required. In some instances (e.g., tanker truck loading/unloading, etc.), flexible hosing may be used to facilitate transfer into or between storage tanks. In these instances, transfers will be done with high-strength, chemical hoses equipped with locking connections to minimize hazards during the loading/unloading process. Further, operators will be present and supervising waste transfers between tanks and trucks during loading/unloading operations with flexible hoses.

### **3.4 Prevention of Runoff**

Hazardous waste management units are designed to prevent runoff to other areas of the facility and the environment. This is accomplished by the use of paving, curbs, and trenches to manage any stormwater in the unit area and/or releases that may occur from equipment failure. Acceptable stormwater is routed to the wastewater treatment system.

### **3.5 Preventing Contamination of Water Supplies**

Water supply facilities are not located in close proximity to hazardous waste management units at the facility. As referenced in Section 3.4, units are surrounded by paving, curbing, and trenches to prevent runoff or soil penetration.

### **3.6 Equipment Failure and/or Power Outages**

No special procedures, structures, or equipment specific to RCRA units are used to mitigate the effects of equipment failure or power outages. In the event of a power outage or equipment failure, the flow of hazardous waste to and from storage tanks would be cut off. The HAFs are equipped with fail-close valves such that when a power failure occurs the waste feed is automatically stopped.

### **3.7 Undue Exposure of Personnel**

On-site personnel working in hazardous waste management areas will have a high degree of knowledge regarding hazards posed by the waste and precautions necessary to prevent exposure to the waste. Through a combination of design features, personnel training, and operational practices, exposure to hazardous waste will be minimized. Wastes managed in tanks are hard piped from unloading processes to the tank. With the exception of maintenance activities and sample collection, personnel are not typically exposed to the hazardous waste.

Personnel working at hazardous waste management units have direct access to safety equipment, which includes personal protective equipment (PPE) (e.g., fire retardant clothing, rubber gloves, safety glasses with side shields, steel-toe shoes, hard hat, etc.). If workers detect a release of hazardous waste or are performing activities where exposure could occur (e.g., maintenance, sampling, etc.), they will gauge the extent of potential exposure and determine the level of PPE needed. As necessary, workers will solicit input from environmental, health, and/or safety personnel to determine the level of PPE required to prevent undue exposure.

### **3.8 Prevent Releases to the Atmosphere**

Hazardous waste managed at the facility will first be stored prior to subsequent management. Storage is in tanks and/or containers. Storage tanks receive wastes from onsite and offsite sources and may then pump waste to onsite HAFs via hard piping; thereby minimizing the potential for releases into the atmosphere. In addition to management practices discussed above, the facility performs routine monitoring of equipment in hazardous waste service, which is subject to 40 CFR Part 264, Subpart BB regulations, to detect fugitive emissions from associated equipment (e.g., valves, pump seals, agitator seals, flanges, connectors, etc.). Facility operators also perform routine visual inspections to verify that potential leaks are detected quickly and repaired. Additional information regarding air emissions is provided in Attachment X.

For hazardous waste stored in containers, OxyChem keeps containers closed except when adding or removing waste. In addition, for containers greater than 26 gallons with a volatile organics concentration of 500 ppmw or greater, the facility complies with the requirements of 40 CFR Part 264, Subpart CC to minimize releases to the atmosphere.

### **3.9 Prevention of Ignition, Reaction, and Incompatibility**

Wastes managed in tanks are compatible with other materials managed in related tanks. Some wastes managed at the facility may be reactive, and those wastes are managed in containers. Procedures for management of those wastes for specific hazardous waste management units is provided in Attachments V.B.1, V.C.1, V.C.2, V.I.1, and V.I.2 of this application.

Waste streams managed at the facility may demonstrate the characteristic of ignitability (D001). In addition to the procedures specified in the prior sections, the following are used to prevent ignition of ignitable waste streams:

## 5.0 Maps, Figures, and Drawings

Several maps and drawings have been included in this application to reflect details of the OxyChem facility as well as pertinent features of surrounding areas that are within 1,000 feet (and in some cases more) from the facility boundary. The following are the maps, figures, and drawings showing general features of the site and their location within the application:

- USGS Map (facility plot plan) - provided as Figure 1 and included as Attachment C to the Part A Application Form;
- Wind Rose – presented as Figure 2;
- Fences and Gates - presented as Figure 3;
- Sole Source Aquifers in Texas - presented as Figure 4;
- Major Aquifers of Texas - presented as Figure 5;
- Faults of Texas - presented as Figure 6;
- Faults in Proximity to Facility - presented as Figure 7;
- Water Well Report – included as Appendix A;
- Soil Report - included as Appendix B;
- Flood Maps – included as Appendix C; and
- NOAA Precipitation Data – included as Appendix D.

The above maps and drawings included in this application clearly indicate the following:

- Map Scale and Date - Maps, figures, and drawings are shown at the scale noted on the maps and drawing. Dates of the maps and drawings are also shown.

- 100-Year Floodplain Area - FEMA Flood Insurance Rate Maps for the facility area are provided in Appendix C of this General Information Report.
- Surface Waters - Surface waters on and near facility property are shown on the USGS Map (Figure 1). There are no significant surface waters on or adjacent to the facility. Corpus Christi Bay, which forms the southwestern boundary of the facility, is the nearest significant surface water feature in the area.
- Surrounding Land Uses - Surrounding land uses are shown in Figure 1. Adjacent land use consists primarily of industrial and undeveloped property. The closest residential areas to the property are approximately one mile east of the facility in the town of Ingleside.
- Wind Rose - Wind rose information was obtained from the Iowa Environmental Mesonet website maintained by Iowa State University. Data was obtained for the Corpus Christi International Airport in Corpus Christi, Texas, which is approximately 18 miles southwest of the facility and is the closest observation point. A copy of this wind rose for the period 2020 through 2024 is provided as Figure 2.
- Orientation of the Map - Maps contain north arrows.
- Legal Boundaries of the Facility - The facility legal description is provided as Attachment B of the Part A Application Form. Legal boundaries are also indicated on the USGS Map provided as Figure 1.
- Access Control - Security fencing and gates enclose the property as reflected on Figure 3.
- Injection and Withdrawal Wells - There are no active injection or withdrawal wells associated with the facility. Locations of water wells and supporting information is provided in Appendix A.
- Buildings - The container storage areas, administration buildings, and control buildings are reflected on Figure 1, which are the primary facility buildings.

- Barriers for Drainage and Flood Control - There are no flood control barriers (e.g., levees) at the facility. Drainage control barriers consist of curbing, open flumes, ditches, and dikes where applicable, and they are reflected on the drawings.
- Location of Operational Units - Hazardous waste management units subject to permitting are shown on Figure 1.



## 6.0 Flood Plain Information

Appendix C (Flood Maps) includes regional floodplain maps of the area of San Patricio County where the OxyChem facility is located as well as properties immediately surrounding the site. Appendix C indicates that the majority of the facility lies completely in Zone X. According to the legend in Appendix C, Zone X is designated as being outside the 100-year floodplain area. The southern portion of the facility along the La Quinta Channel of Corpus Christi Bay is represented as being in Zone AE, which denotes areas of minimal flooding.

Since the portions of the facility that contain the hazardous waste management units are not located in the 100-year floodplain, the following supplemental information is not included in the application:

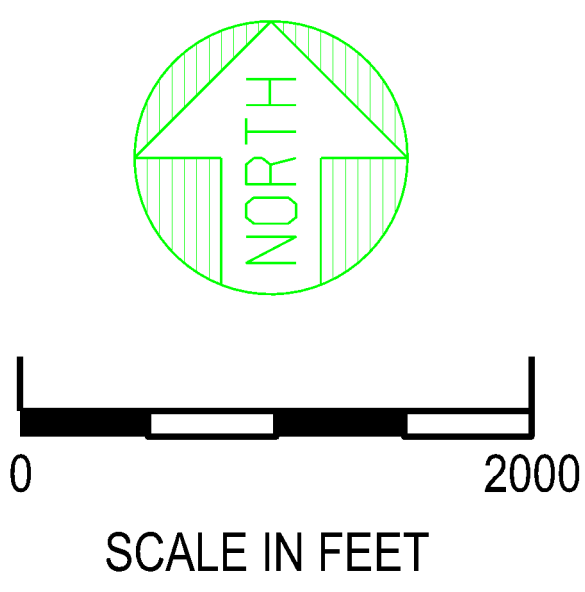
- Specific flooding levels, other events (e.g., design floods, hurricanes, etc.), and flooding factors (e.g., wave actions) that the considerations to design/operating effectiveness must be identified;
- Evaluation of flood protection devices; and/or
- Contingent waste removal procedures if flood protection is not provided.

The National Oceanic and Atmospheric Administration (NOAA) precipitation data for Portland, Texas is presented in Appendix D. The presented information indicates that the 25-year, 24-hour rainfall event for the facility is 10.1 inches.





MAP SOURCE: USGS 7.5 MIN. QUAD SHEETS ARANSAS PASS, TX., 2022; GREGORY, TX, 2022, PORT OF INGLESIDE, TX, 2022, PORTLAND, TX, 2022



- FACILITY BOUNDARY
- ONE MILE RADIUS
- OUTFALL LOCATION
- MONITORING WELL LOCATION AND IDENTIFICATION NUMBER

OXYCHEM

DATE: 06/17/2025 FILE: ATT-C-USGSMAP.DGN

ATTACHMENT C  
USGS MAP







## **Appendix D**

### **NOAA Precipitation Data**



NOAA Atlas 14, Volume 11, Version 2  
 Location name: Portland, Texas, USA\*  
 Latitude: 27.8808°, Longitude: -97.2442°  
 Elevation: 21 ft\*\*  
 \* source: ESRI Maps  
 \*\* source: USGS



### POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sandra Pavlovic, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Orlan Wilhite

NOAA, National Weather Service, Silver Spring, Maryland

[PF tabular](#) | [PF graphical](#) | [Maps & aeriels](#)

#### PF tabular

| PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) <sup>1</sup> |                                     |                        |                        |                       |                       |                      |                      |                      |                     |                     |
|----------------------------------------------------------------------------------------------------------|-------------------------------------|------------------------|------------------------|-----------------------|-----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|
| Duration                                                                                                 | Average recurrence interval (years) |                        |                        |                       |                       |                      |                      |                      |                     |                     |
|                                                                                                          | 1                                   | 2                      | 5                      | 10                    | 25                    | 50                   | 100                  | 200                  | 500                 | 1000                |
| 5-min                                                                                                    | 0.490<br>(0.371-0.648)              | 0.575<br>(0.438-0.750) | 0.710<br>(0.541-0.933) | 0.825<br>(0.619-1.10) | 0.984<br>(0.716-1.35) | 1.11<br>(0.785-1.56) | 1.24<br>(0.852-1.79) | 1.37<br>(0.919-2.04) | 1.55<br>(1.00-2.38) | 1.68<br>(1.07-2.66) |
| 10-min                                                                                                   | 0.777<br>(0.588-1.03)               | 0.912<br>(0.695-1.19)  | 1.13<br>(0.860-1.48)   | 1.31<br>(0.985-1.75)  | 1.57<br>(1.14-2.16)   | 1.77<br>(1.26-2.50)  | 1.97<br>(1.36-2.86)  | 2.18<br>(1.46-3.24)  | 2.44<br>(1.59-3.76) | 2.64<br>(1.67-4.18) |
| 15-min                                                                                                   | 0.988<br>(0.748-1.30)               | 1.16<br>(0.882-1.51)   | 1.43<br>(1.09-1.87)    | 1.65<br>(1.24-2.20)   | 1.97<br>(1.43-2.70)   | 2.21<br>(1.57-3.12)  | 2.46<br>(1.70-3.57)  | 2.72<br>(1.83-4.05)  | 3.07<br>(2.00-4.73) | 3.34<br>(2.12-5.28) |
| 30-min                                                                                                   | 1.42<br>(1.07-1.87)                 | 1.65<br>(1.26-2.15)    | 2.02<br>(1.54-2.66)    | 2.34<br>(1.76-3.12)   | 2.78<br>(2.02-3.81)   | 3.11<br>(2.20-4.39)  | 3.46<br>(2.38-5.01)  | 3.83<br>(2.57-5.70)  | 4.34<br>(2.82-6.69) | 4.74<br>(3.00-7.50) |
| 60-min                                                                                                   | 1.86<br>(1.41-2.46)                 | 2.18<br>(1.66-2.84)    | 2.70<br>(2.05-3.54)    | 3.13<br>(2.35-4.17)   | 3.73<br>(2.71-5.12)   | 4.20<br>(2.97-5.92)  | 4.68<br>(3.23-6.79)  | 5.22<br>(3.51-7.78)  | 5.98<br>(3.89-9.22) | 6.60<br>(4.18-10.4) |
| 2-hr                                                                                                     | 2.26<br>(1.72-2.97)                 | 2.72<br>(2.08-3.50)    | 3.44<br>(2.63-4.48)    | 4.05<br>(3.06-5.37)   | 4.94<br>(3.61-6.73)   | 5.64<br>(4.01-7.90)  | 6.39<br>(4.43-9.20)  | 7.24<br>(4.88-10.7)  | 8.46<br>(5.51-12.9) | 9.46<br>(6.01-14.8) |
| 3-hr                                                                                                     | 2.49<br>(1.90-3.26)                 | 3.04<br>(2.32-3.89)    | 3.90<br>(2.99-5.05)    | 4.65<br>(3.52-6.13)   | 5.74<br>(4.21-7.80)   | 6.62<br>(4.73-9.25)  | 7.59<br>(5.27-10.9)  | 8.68<br>(5.87-12.8)  | 10.3<br>(6.70-15.6) | 11.6<br>(7.36-18.0) |
| 6-hr                                                                                                     | 2.87<br>(2.20-3.73)                 | 3.60<br>(2.74-4.53)    | 4.70<br>(3.62-6.05)    | 5.69<br>(4.34-7.46)   | 7.15<br>(5.28-9.67)   | 8.36<br>(6.00-11.6)  | 9.70<br>(6.77-13.8)  | 11.2<br>(7.62-16.4)  | 13.5<br>(8.83-20.3) | 15.3<br>(9.80-23.7) |
| 12-hr                                                                                                    | 3.23<br>(2.50-4.18)                 | 4.15<br>(3.17-5.16)    | 5.51<br>(4.27-7.04)    | 6.75<br>(5.17-8.80)   | 8.60<br>(6.38-11.5)   | 10.1<br>(7.31-14.0)  | 11.9<br>(8.32-16.7)  | 13.9<br>(9.45-20.0)  | 16.9<br>(11.1-25.2) | 19.4<br>(12.4-29.7) |
| 24-hr                                                                                                    | 3.60<br>(2.80-4.62)                 | 4.70<br>(3.61-5.81)    | 6.35<br>(4.94-8.06)    | 7.85<br>(6.05-10.2)   | 10.1<br>(7.52-13.4)   | 11.9<br>(8.66-16.4)  | 14.0<br>(9.90-19.7)  | 16.5<br>(11.3-23.6)  | 20.2<br>(13.3-29.9) | 23.3<br>(15.0-35.3) |
| 2-day                                                                                                    | 3.93<br>(3.08-5.02)                 | 5.25<br>(4.07-6.45)    | 7.22<br>(5.67-9.11)    | 9.00<br>(6.98-11.6)   | 11.6<br>(8.70-15.4)   | 13.8<br>(10.0-18.7)  | 16.2<br>(11.4-22.5)  | 18.9<br>(13.0-26.9)  | 23.0<br>(15.2-33.8) | 26.4<br>(17.1-39.6) |
| 3-day                                                                                                    | 4.26<br>(3.35-5.42)                 | 5.66<br>(4.40-6.93)    | 7.75<br>(6.10-9.74)    | 9.65<br>(7.50-12.4)   | 12.4<br>(9.37-16.4)   | 14.8<br>(10.8-20.0)  | 17.3<br>(12.3-24.0)  | 20.2<br>(13.9-28.6)  | 24.4<br>(16.2-35.7) | 27.9<br>(18.0-41.6) |
| 4-day                                                                                                    | 4.55<br>(3.58-5.77)                 | 6.00<br>(4.68-7.35)    | 8.19<br>(6.47-10.3)    | 10.2<br>(7.92-13.0)   | 13.1<br>(9.85-17.2)   | 15.4<br>(11.3-20.8)  | 18.1<br>(12.8-24.9)  | 21.0<br>(14.5-29.6)  | 25.2<br>(16.8-36.7) | 28.7<br>(18.6-42.7) |
| 7-day                                                                                                    | 5.29<br>(4.19-6.68)                 | 6.82<br>(5.38-8.37)    | 9.16<br>(7.28-11.5)    | 11.2<br>(8.81-14.3)   | 14.3<br>(10.8-18.7)   | 16.7<br>(12.3-22.4)  | 19.4<br>(13.8-26.6)  | 22.3<br>(15.5-31.3)  | 26.5<br>(17.7-38.3) | 29.9<br>(19.5-44.2) |
| 10-day                                                                                                   | 5.89<br>(4.67-7.41)                 | 7.48<br>(5.94-9.19)    | 9.95<br>(7.93-12.4)    | 12.1<br>(9.52-15.4)   | 15.2<br>(11.6-19.8)   | 17.7<br>(13.1-23.7)  | 20.4<br>(14.6-27.9)  | 23.4<br>(16.2-32.6)  | 27.5<br>(18.4-39.6) | 30.9<br>(20.1-45.4) |
| 20-day                                                                                                   | 7.46<br>(5.96-9.33)                 | 9.25<br>(7.48-11.5)    | 12.2<br>(9.82-15.2)    | 14.6<br>(11.6-18.4)   | 18.0<br>(13.7-23.2)   | 20.5<br>(15.1-27.1)  | 23.1<br>(16.6-31.3)  | 26.0<br>(18.2-36.0)  | 30.1<br>(20.3-42.9) | 33.4<br>(21.8-48.6) |
| 30-day                                                                                                   | 8.70<br>(6.98-10.8)                 | 10.7<br>(8.71-13.3)    | 14.0<br>(11.3-17.4)    | 16.6<br>(13.2-20.9)   | 20.2<br>(15.4-25.9)   | 22.8<br>(16.9-29.9)  | 25.4<br>(18.3-34.2)  | 28.3<br>(19.8-39.0)  | 32.3<br>(21.8-45.9) | 35.5<br>(23.3-51.4) |
| 45-day                                                                                                   | 10.4<br>(8.39-12.9)                 | 12.6<br>(10.3-15.6)    | 16.3<br>(13.3-20.2)    | 19.3<br>(15.4-24.2)   | 23.3<br>(17.8-29.8)   | 26.2<br>(19.5-34.3)  | 29.2<br>(21.1-39.1)  | 32.2<br>(22.6-44.2)  | 36.3<br>(24.6-51.2) | 39.5<br>(25.9-56.9) |
| 60-day                                                                                                   | 11.9<br>(9.63-14.8)                 | 14.3<br>(11.7-17.7)    | 18.4<br>(14.9-22.7)    | 21.6<br>(17.3-27.0)   | 26.1<br>(20.0-33.3)   | 29.4<br>(22.0-38.4)  | 32.7<br>(23.7-43.7)  | 36.0<br>(25.3-49.1)  | 40.2<br>(27.2-56.4) | 43.4<br>(28.5-62.2) |

<sup>1</sup> Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

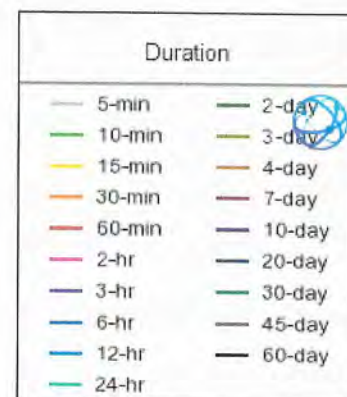
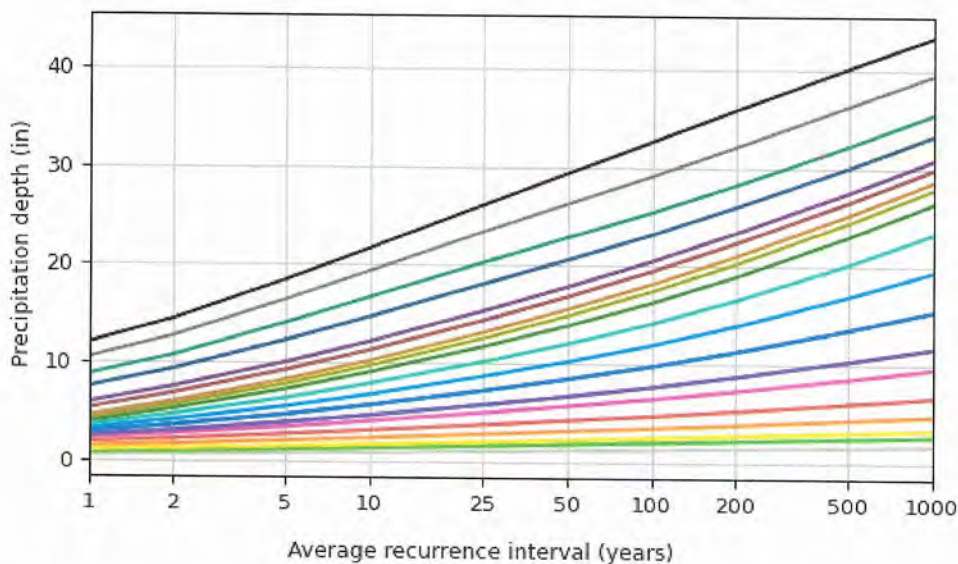
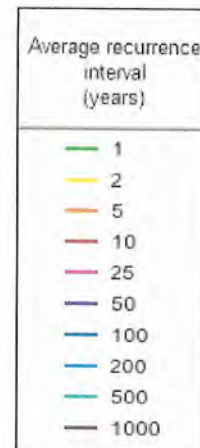
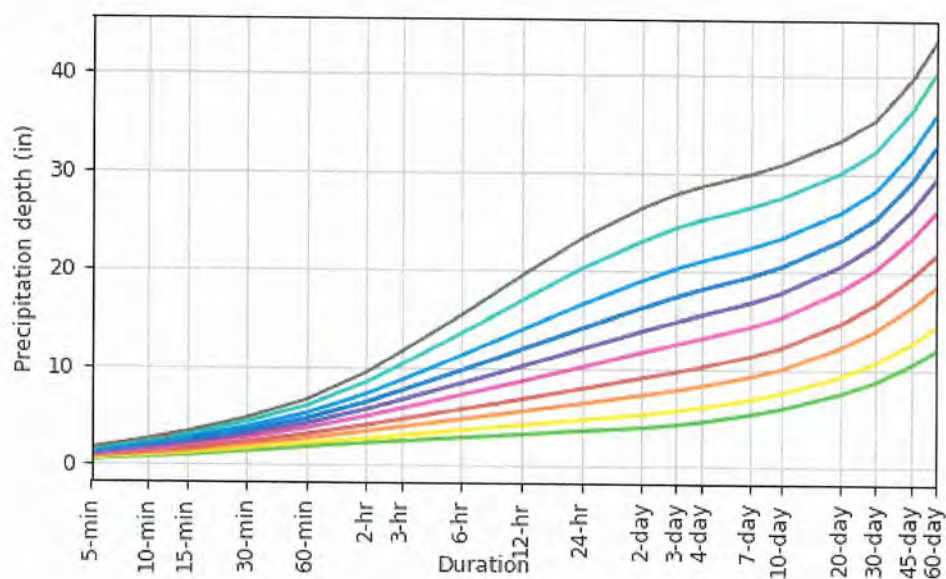
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#### PF graphical



## PDS-based depth-duration-frequency (DDF) curves

Latitude: 27.8808°, Longitude: -97.2442°

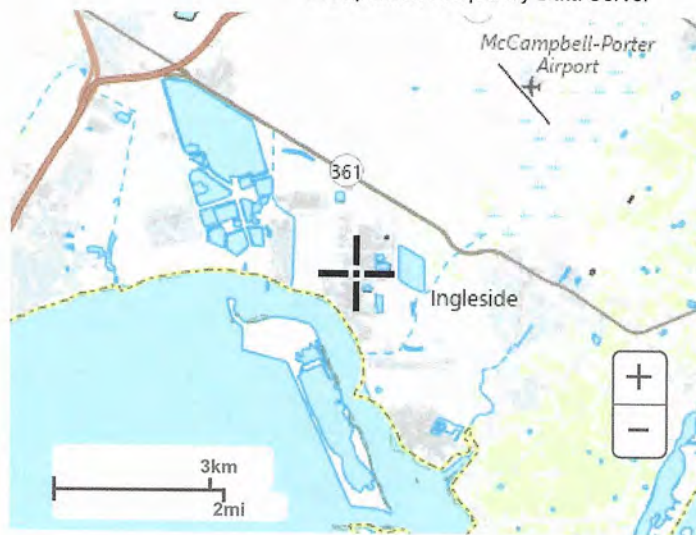


NOAA Atlas 14, Volume 11, Version 2

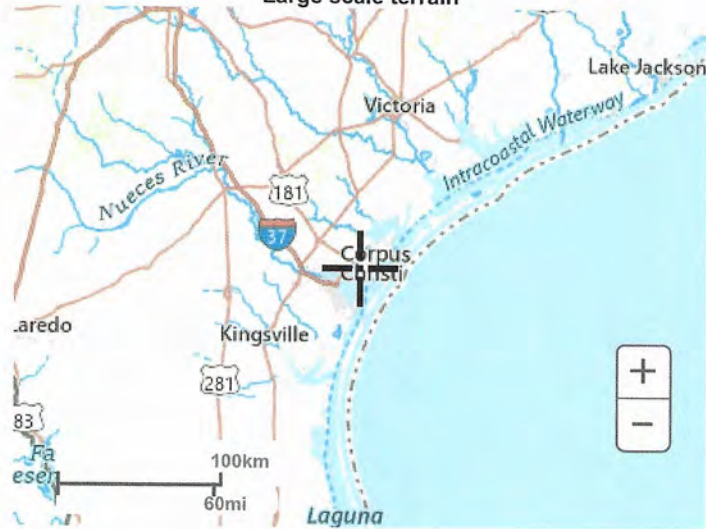
Created (GMT): Thu Sep 18 20:47:48 2025

[Back to Top](#)**Maps & aeriels**

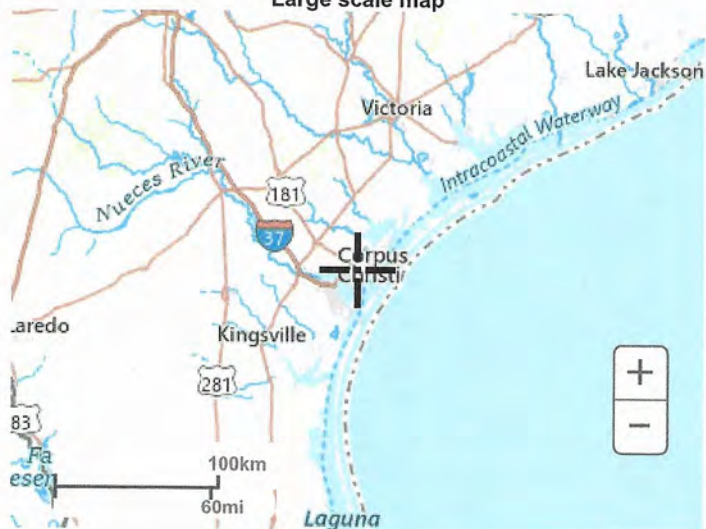
Small scale terrain



Large scale terrain



Large scale map



Large scale aerial





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## **Attachment V.B**

### **VCM Container Storage Area**

Table V.B. - Container Storage Area

| Permit Unit No. | Container Storage Area | N.O.R. No. | Waste Nos. <sup>4</sup> | Rated Capacity <sup>3</sup> | Dimensions | Containment Volume (including rainfall for unenclosed areas) | Unit will manage Ignitable <sup>1</sup> , Reactive <sup>1</sup> , or Incompatible <sup>2</sup> waste (state all that apply) | Unit Status |
|-----------------|------------------------|------------|-------------------------|-----------------------------|------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------|
| 5               | VCM                    | 022        | All                     | 9,240 gal.                  | 41' x 21'  | 4,438 gallons                                                | Ignitable and Reactive                                                                                                      | Active      |
|                 |                        |            |                         |                             |            |                                                              |                                                                                                                             |             |
|                 |                        |            |                         |                             |            |                                                              |                                                                                                                             |             |
|                 |                        |            |                         |                             |            |                                                              |                                                                                                                             |             |
|                 |                        |            |                         |                             |            |                                                              |                                                                                                                             |             |
|                 |                        |            |                         |                             |            |                                                              |                                                                                                                             |             |
|                 |                        |            |                         |                             |            |                                                              |                                                                                                                             |             |
|                 |                        |            |                         |                             |            |                                                              |                                                                                                                             |             |
|                 |                        |            |                         |                             |            |                                                              |                                                                                                                             |             |
|                 |                        |            |                         |                             |            |                                                              |                                                                                                                             |             |
|                 |                        |            |                         |                             |            |                                                              |                                                                                                                             |             |
|                 |                        |            |                         |                             |            |                                                              |                                                                                                                             |             |

1. Containers managing ignitable or reactive waste must be located at least 15 meters (50 feet) from the facility's property line.
2. Incompatible waste must be separated from other waste or materials stored nearby in other containers, piles, open tanks, or surface impoundments by means of a dike, berm, wall, or other device.
3. Container Storage Areas need to include in capacity calculations any nonhazardous wastes and universal wastes managed in the unit in addition to hazardous wastes.
4. from Table IV.B, first column

## **Attachment V.B.1**

### **VCM Container Storage Area Report**

**OxyChem**  
**Ingleside, Texas**



ATLAS TECHNICAL CONSULTANTS LLC  
15740 Park Row Drive, Suite 200  
Houston, TX 77084  
TBPE Firm Registration No. - F-19813

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### 3.0 Unit Details

With dimensions of 41 feet by 21 feet and 8-inch curbing, the VCM Container Storage Area has approximately 860 square feet of curbed and covered floor space and has a secondary containment volume of 4,438 gallons (see calculation in Appendix C). The roof structure is built of typical pre-engineered metal construction.

Design information for the VCM Container Storage Area is provided as Appendix B. The following provide design and construction specifications for the unit:

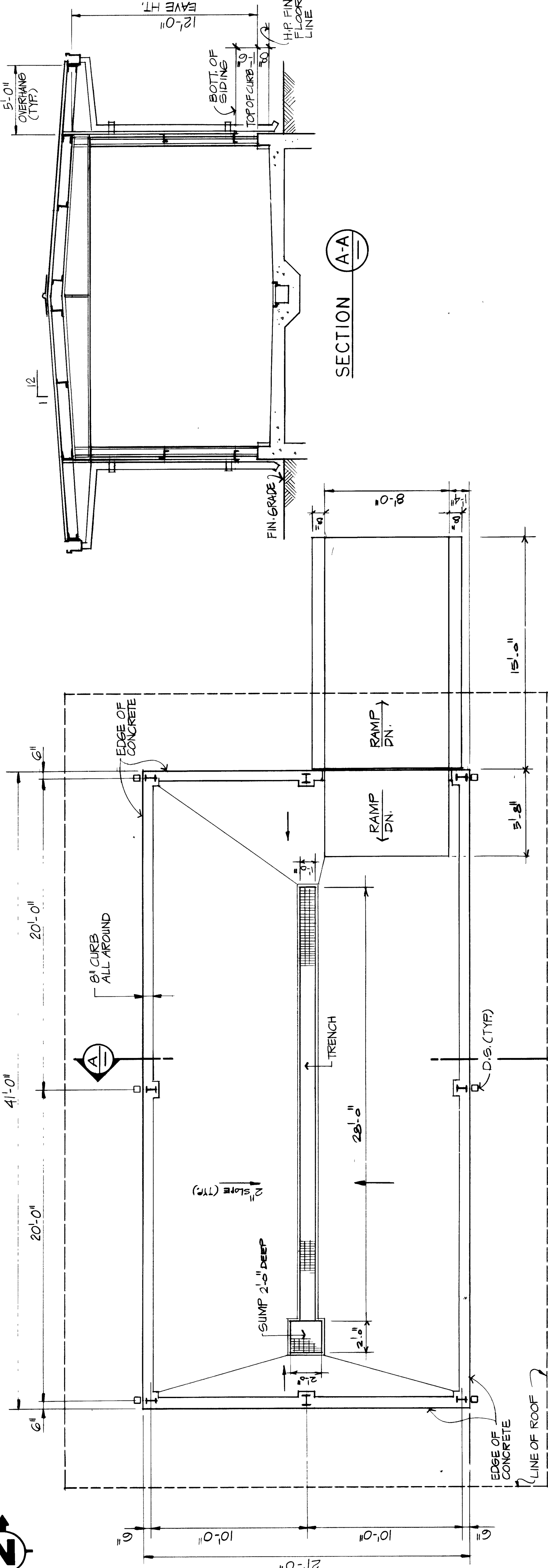
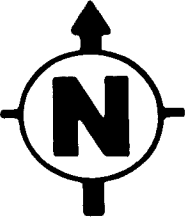
- The foundation for the unit is constructed of 8-inch thick reinforced concrete. The foundation is a floating slab design and serves as the floor of the storage area as well.
- The floor of the unit include an integral 8-inch tall peripheral curb to provide containment if releases from stored containers occurs.
- The unit is enclosed on three sides, so significant precipitation accumulation does not occur. Also, containers are typically placed on pallets to elevate the bottom of the container off the secondary containment surface.
- The VCM Container Storage Area is designed to store a maximum of 9,240 gallons of waste in containers. The quantity and type of waste will vary dependent on generating conditions.
- The minimum required secondary containment volume is 10% of the maximum storage capacity or the volume of the largest container, whichever is greater (40 CFR 264.175(b)(3)). The minimum required secondary containment volume is 924 gallons. The secondary containment volume is calculated in Appendix C to be 4,438 gallons. Therefore, the minimum required secondary containment volume is provided.
- Rainfall run-on into the VCM Container Storage Area is minimized by the roof and perimeter curbing.



## **4.0 Closure**

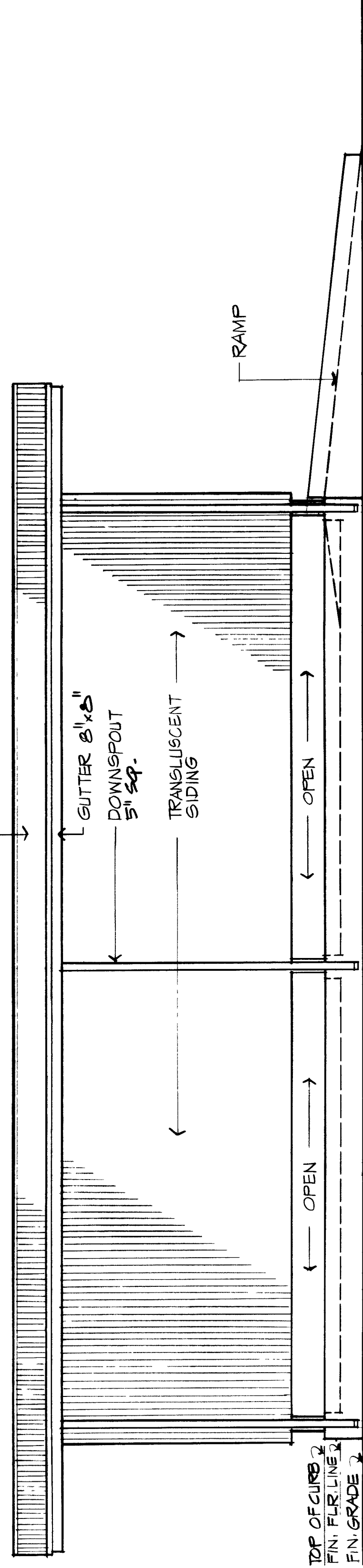
A closure plan, which describes the procedures that will be implemented for closure of the VCM Container Storage Area is provided in Attachment VII.A.1. Closure cost estimates are also provided as part of the closure plan.

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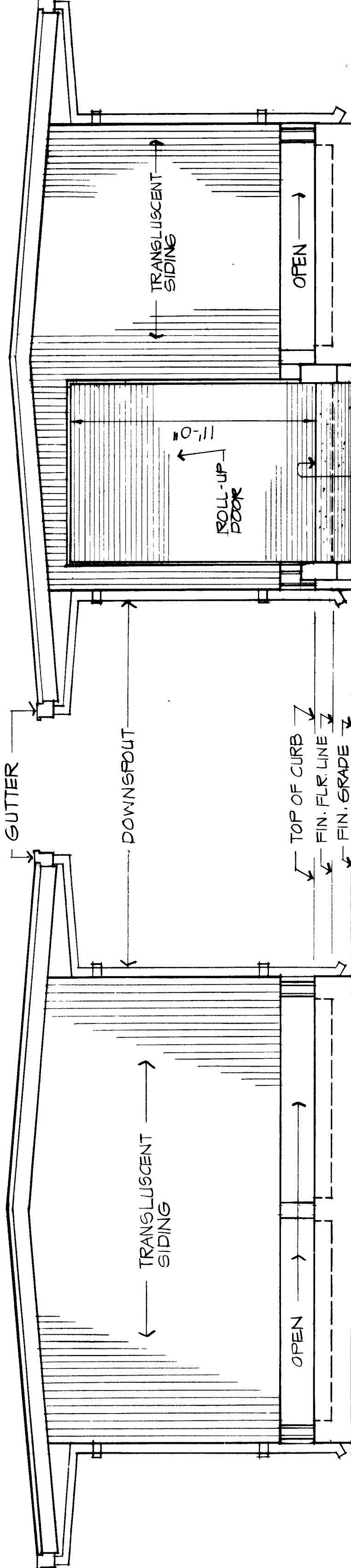


SECTION A-A

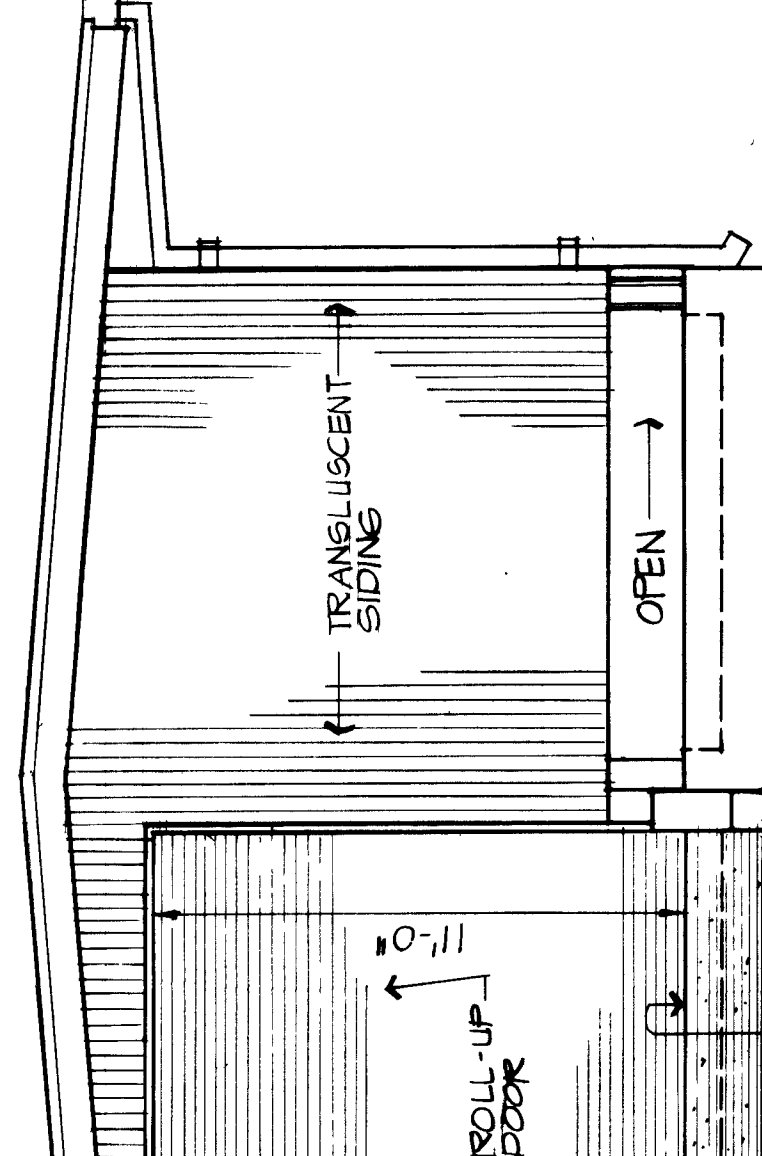
FLOOR PLAN



EAST ELEVATION



SOUTH ELEVATION



NORTH ELEVATION

GENERAL NOTES

1. BUILDING STEEL FRAME (COLUMNS, BEAMS, GIRTS, PURLINS) PAINTED (MTC PAINT INTERIOR PER SPEC. FIG. 11.2.11)
2. PRE-ENGINEERED BUILDING DESIGN CRITERIA:  
WIND LOADS PER ANSI A-58.1-1982  
BASIC WIND SPEED "V" SHALL BE 110 MPH  
IMPORTANCE FACTOR "I" SHALL BE 1.05  
K<sub>2</sub>, G<sub>1</sub>, G<sub>2</sub> BASED ON EXPOSURE C
3. ROLLING DOORS SHALL BE GALVANIZED, INTERIOR MOUNTED, CHAIN HOIST OPERATION.  
CHAIN HOIST SHALL BE THRU WALL, EXTERIOR MOUNTED W/ EXTERIOR HOIST COVER.  
FIELD PAINT DOOR, HOOD & HOIST COVER TO MATCH METAL SIDING.  
ROLLING DOOR: "OVERHEAD DOOR" FN 2.  
REFER SPEC. 19G11-R-13
4. VERIFY PURLIN & GIRT SPACING TO MEET DESIGN LOADS & MAXIMUM PERMISSIBLE SPANS FOR METAL ROOF & TRANSLUCENT SIDING.
5. TRENCH & SUMP GRATING: 2 1/2" x 1/4" W/ BARS @ 13/16" O.C.  
PROVIDE CONTINUOUS SLOPE ANGLE FRAME FOR GRATING.  
SLOPE TRENCH 4" TO SUMP.
6. REFER DRAWG. 9D-001-901 FOR FLOT PLAN
7. "FINISH GRADE" IS TO BE AT ELEV. 17.5 FT.
8. "FINISH FLOOR" IS TO BE AT ELEV. 18.5 FT.

## **Appendix C**

### **Secondary Containment Volume Calculation**

## Volume of VCM CSA Secondary Containment

### Based On:

Dwg. 90-00-R-055

Dwg. R.C.R.A. Drum Storage Area - Sheet 1 of 2

### Equations

Volume of a Box = Length \* Width \* Depth (Height)

Volume of a Right Angle Triangle =  $1/2 * \text{Length} * \text{Width} * \text{Depth (Height)}$

### Area 1 - Gross Volume

|                                      |        |                 |                                |
|--------------------------------------|--------|-----------------|--------------------------------|
| Width of Containment Area            | 19.42  | ft              |                                |
| Length of Containment Area           | 39.42  | ft              |                                |
| Average Depth at Perimeter           | 0.68   | ft              |                                |
| Top of Concrete Elevation            | 19.77  | ft              |                                |
| Elevation at Trench and Sump         | 18.94  | ft              |                                |
| Average Depth at Trench and Sump     | 0.83   | ft              |                                |
| Volume of Average Depth (0.68')      | 520.56 | ft <sup>3</sup> | Volume of Box                  |
| Ht. Diff. - Perimeter to Trench/Sump | 0.15   | ft              |                                |
| Volume of Sloped Area                | 57.42  | ft <sup>3</sup> | Volume of Right Angle Triangle |
| Gross Volume                         | 577.98 | ft <sup>3</sup> |                                |

### Area 2 - Trench Volume

|                                    |       |                 |               |
|------------------------------------|-------|-----------------|---------------|
| Trench Length                      | 27.95 | ft              |               |
| Trench Width                       | 1.00  | ft              |               |
| Average Bottom of Trench Elevation | 18.10 | ft              |               |
| Trench Depth                       | 0.84  | ft              |               |
| Volume of Trench                   | 23.48 | ft <sup>3</sup> | Volume of Box |

### Area 3 - Sump Volume

|                          |       |                 |               |
|--------------------------|-------|-----------------|---------------|
| Sump Length              | 2.00  | ft              |               |
| Sump Width               | 2.00  | ft              |               |
| Bottom of Sump Elevation | 16.95 | ft              |               |
| Sump Depth               | 1.99  | ft              |               |
| Volume of Sump           | 7.96  | ft <sup>3</sup> | Volume of Box |

**Area 4 - Ramp Volume**

|                |       |                 |                                |
|----------------|-------|-----------------|--------------------------------|
| Length of Ramp | 5.17  | ft              |                                |
| Width of Ramp  | 8.00  | ft              |                                |
| Height of Ramp | 0.75  | ft              |                                |
| Volume of Ramp | 15.51 | ft <sup>3</sup> | Volume of Right Angle Triangle |

**Area 5 - Pedestal Volume**

|                            |      |                 |               |
|----------------------------|------|-----------------|---------------|
| Average Depth at Perimeter | 0.68 | ft              |               |
| 4 x 1/4 Pedestal Block =   | 1    | Unit            |               |
| 4 x 1/2 Pedestal Block =   | 2    | Units           |               |
| Total Pedestal Units       | 3    | Units           |               |
| Pedestal Length            | 1.00 | ft              |               |
| Pedestal Width             | 0.33 | ft              |               |
| Pedestal Volume            | 0.22 | ft <sup>3</sup> | Volume of Box |
| Total Pedestal Volume      | 0.67 | ft <sup>3</sup> |               |

**Total Volume**

|                                        |        |                 |
|----------------------------------------|--------|-----------------|
| 1 + 2 + 3 - 4 - 5                      | 593.23 | ft <sup>3</sup> |
| 7.4805 gal/ft <sup>3</sup>             | 4,438  | gallons         |
| VCM CSA Storage Volume                 | 9,240  | gallons         |
| Minimum 10% of Storage Volume          | 924    | gallons         |
| Therefore, Adequate Containment Volume |        |                 |



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## **Attachment V.C**

### **Tanks and Tank Systems**





## **Attachment V.C.1**

### **C-720A Tank System**

**Attachment V.C.1**

**Tank C-720A Report**

**OxyChem**  
**Ingleside, Texas**



10/24/2025

ATLAS TECHNICAL CONSULTANTS LLC  
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TBPE Firm Registration No. - F-19813

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| Appendix B | Integrity Assessment Report              |
| Appendix C | Example Daily Inspection Form            |
| Appendix D | Secondary Containment Volume Calculation |

## **2.0 Tank System Plans and Specifications**

Tank C-720A will receive the following waste streams identified in the Waste Analysis Plan (Attachment IV.D), which may contain a variety of EPA waste codes, for collection and storage prior to subsequent treatment:

- Waste oil;
- VCM heavy ends;
- VCM light ends;
- Mother liquor; and
- EDC heavy ends.

Feed systems used to transfer waste to the tank will generally consist of pumps, hard piping, connections, and controllers necessary for safe transport. Incoming wastes may be introduced into RCRA permitted storage tanks using one of two methods. The primary feed system mechanism will consist of hard piping from the production process to the storage tank. In addition to hard piping from production areas to the tank, piping (hard and/or flex) may also be used, at times, to transfer wastes associated with common tank groupings to facilitate processing and/or treatment. When flexible piping is used, it will consist of stainless steel piping with sufficient strength for the operating pressures.

Since waste streams managed in the tank may be ignitable, the tank is equipped with a nitrogen blanket in the tank headspace. All tank vents are routed to appropriate emission controls.

### **2.1 Tank**

C-720A is an elevated, spherical tank with a diameter of 26 feet and nominal capacity of 65,000 gallons. Drawings for the tank are provided as Appendix A. The tank is constructed of SA516-70 carbon steel designed and constructed in accordance with American Society of Mechanical Engineers (ASME) Section VIII, Division 1 criteria. The tank is a pressure vessel with a pressure of 15 psi at 200 °F. Tanks used by OxyChem to store RCRA hazardous wastes are designed based on appropriate American Society of Testing and Materials (ASTM) grade materials and are designed based on ASME standards.

A detailed description of the tank, which contains a written assessment of the tank's structural integrity and suitability for waste handling was performed and has been prepared by an independent, qualified, registered professional engineer as required under 40 CFR 264.192, is

provided as Appendix B. The tank report, drawings, and associated integrity assessment demonstrates that the tank system has been adequately designed and has sufficient structural strength and compatibility with the waste(s) stored, to ensure that it will not collapse, rupture, or fail. The assessment considers design standards, waste characteristics, corrosion control measures, age of the system, and results of a tank integrity examination.

Wastes managed in the tank are assessed for their potential impact on the materials of the tank, pipes, valves, pumps, and other ancillary equipment. Materials of construction for the tank are then selected based on their compatibility with the wastes. Wastes are subsequently evaluated and tested, as necessary, to ensure that the wastes do not impact the integrity of the system.

Tank C-720A is aboveground and situated on a concrete foundation. As such, external shell and metal components will not come in contact with soil or water under normal conditions and corrosion is minimized.

The tank operates under a nitrogen blanketing system designed to displace any oxygen that may be present and maintains a slight pressure of nitrogen in the vapor space.

To prevent spills/overfills from the tank, the following are in place:

- Work practices, training, and procedures for operators and contractors;
- Level sensors in the tank;
- High level alarm for the tank; and
- Controllers to facilitate rapid waste shutdown.

## **2.2 Ancillary Equipment**

Ancillary equipment associated with the tank includes typical equipment (e.g., hard piping, connections, pumps, controllers, etc.) associated with the tank as well as equipment specific to the tank's use. To facilitate transfer between tanks and/or optimize operations, flexible, stainless steel, hose piping may also be used in conjunction with storage activities.

Ancillary equipment is supported (e.g., bolted, saddled, strapped, etc.) as necessary to prevent damage that could result from vibration associated with operation or from stresses that could arise from environmental factors (e.g., settlement, expansion).



## 5.5 Secondary Containment

Secondary containment is operated and maintained to control and contain spills, leaks, other releases of hazardous wastes, water and chemical agents used to control a fire, and precipitation falling within the tank or secondary containment areas. The secondary containment volume calculation is included in Appendix D. As presented in Attachment V.A, Appendix D, the 25-year, 24-hour rainfall event for the facility is 10.1 inches, which is accounted for in the secondary containment volume calculations as required by 40 CFR 264.193(e)(1)(ii). The secondary containment volume is 72,097 gallons, which is greater than the largest tank within its boundary (i.e., 65,000 gallons) as required by 40 CFR 264.193(e)(1)(i).

Spilled hazardous wastes in the secondary containment area may be collected and transferred to a suitable tank, collected by vacuum truck, or cleaned up using absorbents which would be put into containers, for treatment and/or disposal at an authorized facility. If spilled wastes are pumped into a tank, the contents of the tank are processed, or treated and disposed of in an appropriate facility as soon as possible in order to restore capacity to the tank system.

Residues or contaminated solids generated during a cleanup or emergency will be collected and placed in appropriate containers for subsequent management at an authorized facility. These wastes are handled as hazardous, unless they can otherwise be shown to be non-hazardous by appropriate testing and regulations.

## 5.6 Containment and Liquids Removal

Spills, leaks, or other released materials will be contained within the tank area secondary containment system. Immediately upon detection of the leak, personnel would check to ensure that the containment valves are closed and take steps to ensure that incoming flow to the affected equipment is blocked. If the leak is significant, the contents of the leaking tank will be transferred to another suitable tank or container until the level is below that of the leak. A RCRA hazardous determination will be made on spilled material and appropriate action taken.

As soon as possible, OxyChem will clean up leaks or spills of waste in secondary containment in order to reduce the potential for contamination. Under normal conditions, rainfall or other waters (e.g., wash water) collected in the secondary containment area will not be hazardous.

Therefore, collected rainfall and routine wash water will be managed as non-hazardous and discharged to the wastewater system.

Under certain conditions, it is necessary to manage rainfall/wash water as a RCRA hazardous waste:

- If a leak or spill of hazardous waste has not been cleaned up prior to a rainfall;
- If wash water is used to clean up after a leak or spill of hazardous waste; or
- If a leak or spill of hazardous waste occurs while rainfall or wash water is on the containment pad.

## **5.7 Emergency Response**

Inflows to the tank will be stopped if an emergency situation occurs involving the tank and/or ancillary equipment, including electrical or equipment failure, or fire. If necessary, the storage tanks may be cooled by using the tank farm water deluge system. Depending upon the magnitude of a spill, a layer of water will be maintained over spilled material to prevent volatilization or the spread of fires. Furthermore, water deluge may be used to flush flammable or toxic material to the secondary containment basin. Emergency response materials collected in the secondary containment basin will be handled as RCRA hazardous waste if they are classified as hazardous waste via the Mixture Rule.

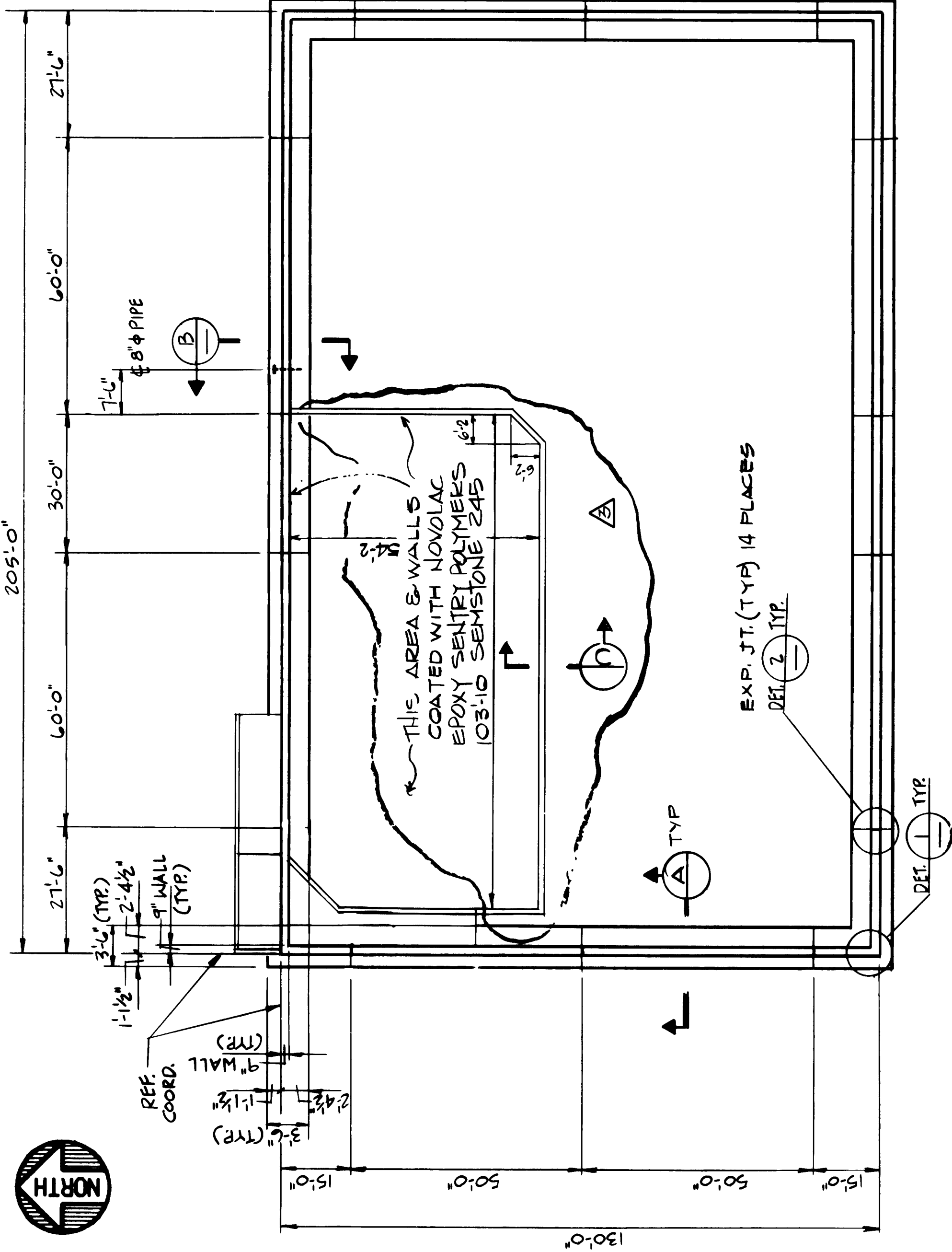
## **6.0 Closure**

A closure plan, which describes the procedures that will be implemented for closure of Tank C-720A, is provided in Attachment VII.A.2. Closure cost estimates are also provided as part of the closure plan.

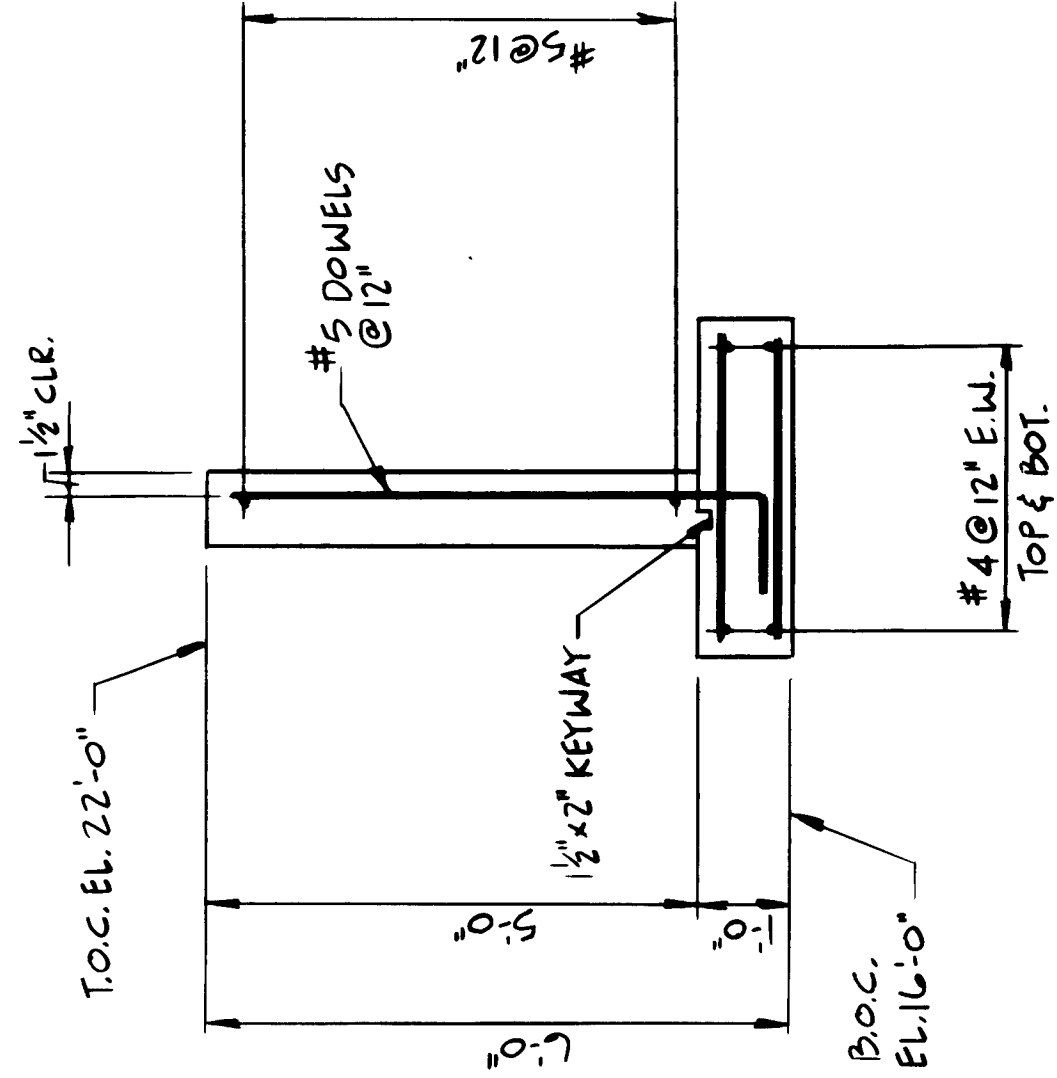
## **Appendix A**

### **Equipment Drawings**

Dwg. 7D-00-A-700, Rev. 5 – EDC Product Storage – Area 7  
Dwg. Record Drawing – Elevation – C-720A  
Dwg. DS-C-720, Rev. 3 – Elevation  
Dwg. 7D-80-Q-007 – Foundation for Tank  
Dwg. DS-C-720, Rev.3 – Design Requirements  
Dwg. 7D-A-004, Rev. 39 – Engineering Flow Diagram – Co-Product Storage  
Dwg. 7D-B-003, Rev. 5 – VCM Plant PFD – Co-Product Storage  
Dwg. 7D-00-Q-023, Rev. 3 – Concrete Dike – EDC Storage

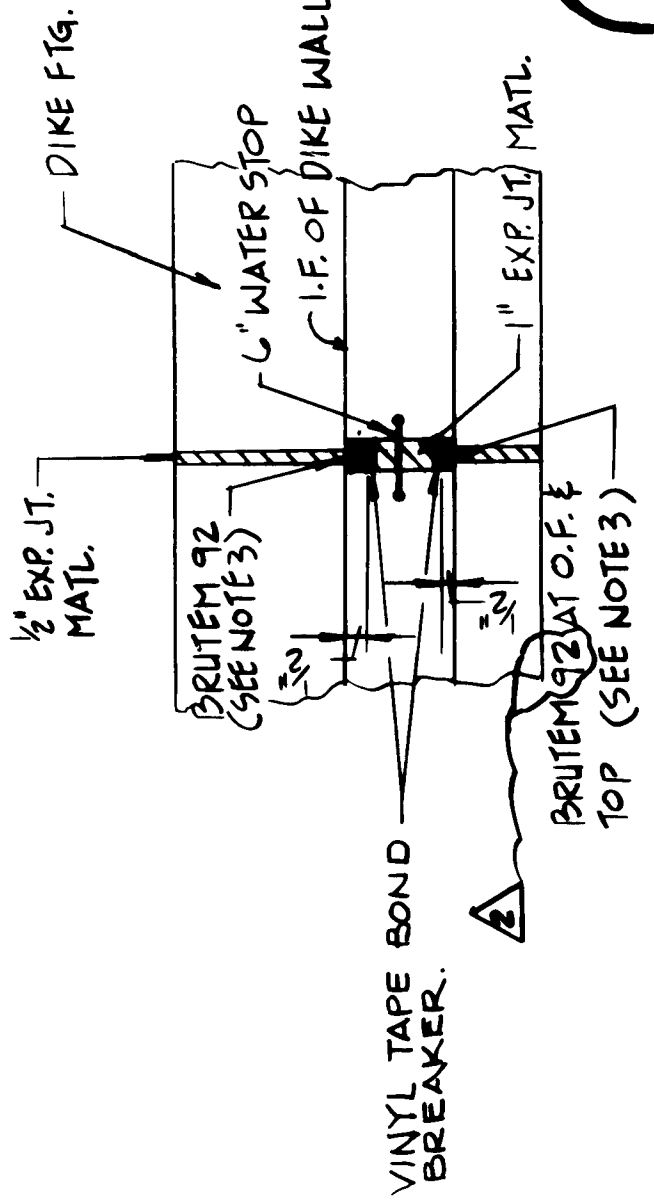


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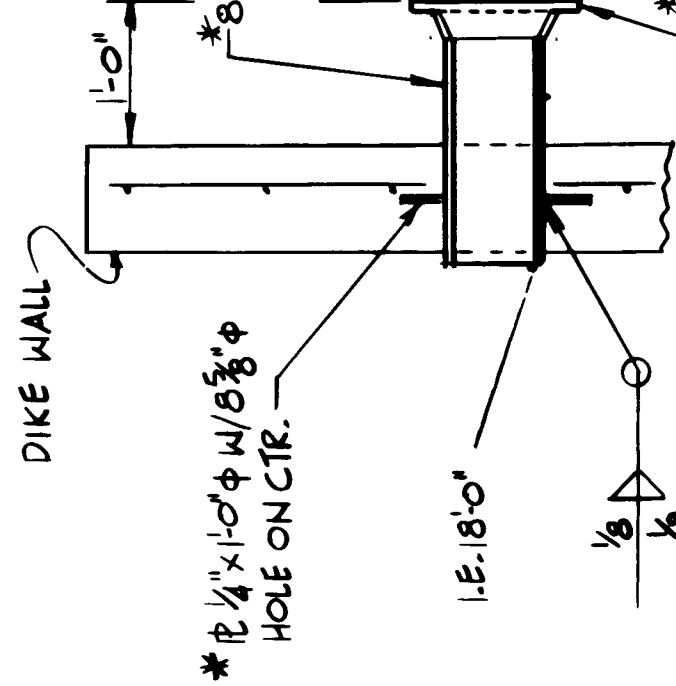


SECTION A  
N.T.S.

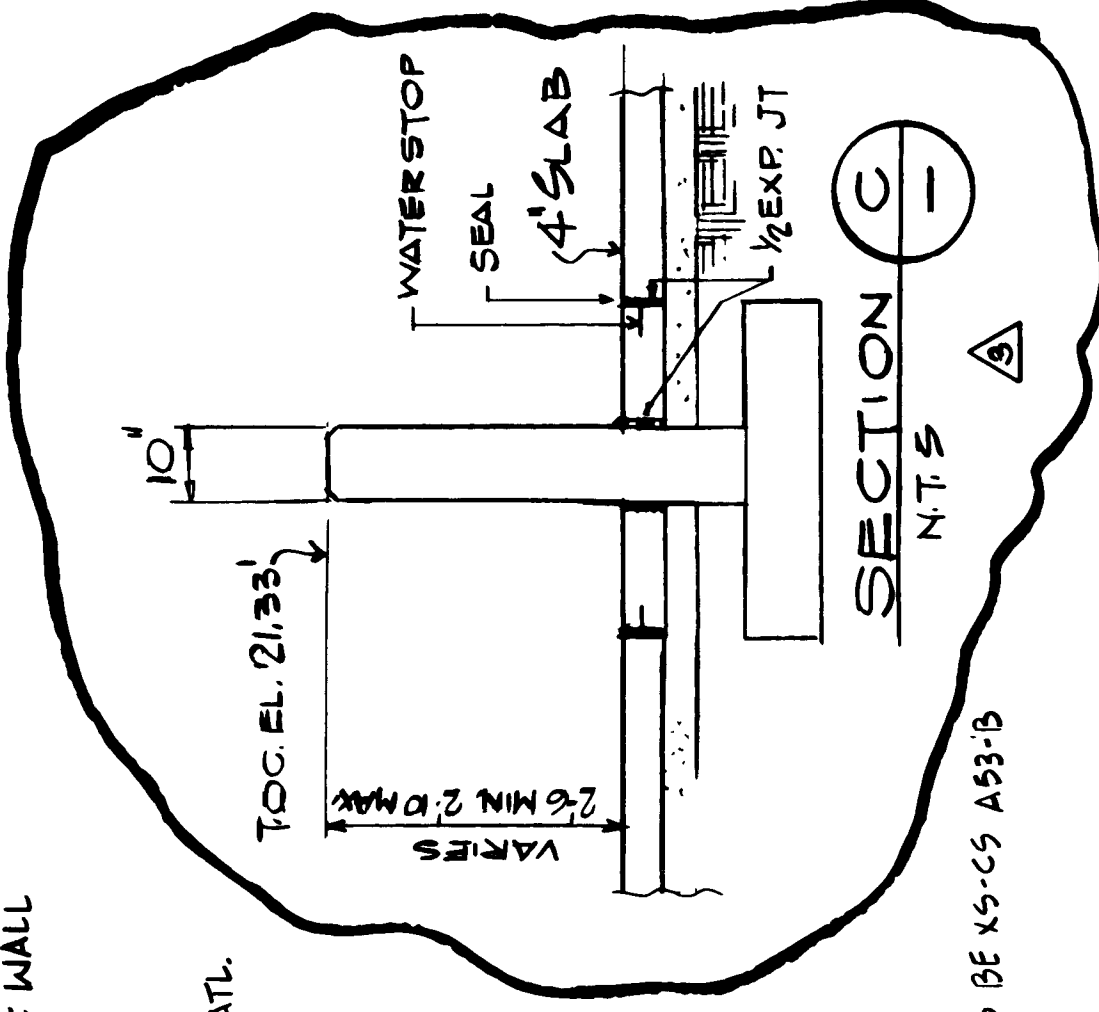
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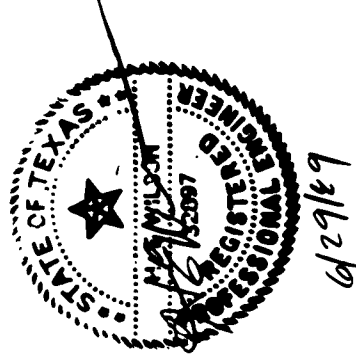
DETAIL 2  
N.T.S.



SECTION B  
N.T.S.



SECTION C  
N.T.S.



## NOTES

- 1) FOR LOCATION SEE PLOT PLAN DWG. 1D-00A-100
- 2) FOR DESIGN AND CONSTRUCTION NOTES FOR REINFORCED CONCRETE SEE DWG. 00-A-Q-1
- 3) JOINT SEALANTS TO BE BRUTEM AS MANUFACTURED BY I.W. INDUSTRIES, HOUSTON TX. REFER TO NOTES 12 & 13 ON DWG. 9D-00-S-078.
- 4) FOR PAVING SEE DWG. 9I-00-S-082

## REFERENCE DRAWINGS

PLOT PLAN  
1D-00A-100  
DESIGN & CONST. NOTES  
00-A-Q-1

| NO. | DATE     | REVISIONS                                        | BY | CHKD | APP. |
|-----|----------|--------------------------------------------------|----|------|------|
| 1   | 10/19/17 | RCRA DIKE AS BUILT                               | DE |      |      |
| 2   | 11/14/17 | REVISED SEALANT TYPE                             | DE |      |      |
| 3   | 11/14/17 | ADDED VINYL TAPE BOND BREAKER (DETAIL 2), NOTE 3 | DE |      |      |
| 4   | 11/14/17 | ISSUED FOR CONST                                 | DE |      |      |

BECHTEL, INC.  
HOUSTON



OXYMAR  
VINYL CHLORIDE MONOMER PLANT  
CORPUS CHRISTI, TEXAS

CONCRETE LIKE - EDC STORAGE

| AREA DESIGNATION | TYPE        | EWR NUMBER | A/E NUMBER |
|------------------|-------------|------------|------------|
| 19611            |             |            |            |
| JOB NO.          | DRAWING NO. | REV.       |            |
| 19611            | 7D-00-Q-023 | 3          |            |





## **Appendix D**

### **Secondary Containment Volume Calculation**



## Volume of Tank C-720A Secondary Containment

### Based On:

Dwg. 7D-00-Q-023

Dwg. 7D-80-Q-007

### Equations

Volume of a Box = Length \* Width \* Depth (Height)

Volume of a Right Angle Triangle =  $1/2 * \text{Length} * \text{Width} * \text{Depth (Height)}$

Volume of a Cylinder =  $\pi * \text{Radius}^2 * \text{Length (Height)}$

**25-Year, 24-Hour Storm Event**                      0.84      ft                      10.1"

Required per 40 CFR 264.193(e)(1)(ii)

Source: NOAA Atlas 14, Volume 11, Version 2 - Portland, Texas - 2025-09-18

### Area 1 - Gross Volume

|                                    |           |                 |                                     |
|------------------------------------|-----------|-----------------|-------------------------------------|
| Width of Containment Area          | 54.17     | ft              | 54' 2"                              |
| Length of Containment Area         | 103.83    | ft              | 103' 10"                            |
| Minimum Height of South Wall       | 1.66      | ft              | 2' 6" - 25-Year, 24-Hour Rain Event |
| Minimum Height Volume              | 9,326.97  | ft <sup>3</sup> | Volume of a Box                     |
| Maximum Height of South Wall       | 2.83      | ft              | 2' 10"                              |
| Height Difference                  | 0.33      | ft              | 2' 10" - 2' 6" = 4"                 |
| Volume of Sloped Height Difference | 937.38    | ft <sup>3</sup> | Volume of a Right Angle Triangle    |
| Total Gross Volume                 | 10,264.36 | ft <sup>3</sup> |                                     |

### Area 2 - NW Corner Volume

|                       |        |                 |                                  |
|-----------------------|--------|-----------------|----------------------------------|
| Corner Length         | 14.25  | ft              | 15' 0" - 9" = 14' 3"             |
| Corner Width          | 14.25  | ft              | 15' 0" - 9" = 14' 3"             |
| Maximum Corner Height | 2.83   | ft              | 2' 10"                           |
| Volume of NW Corner   | 287.67 | ft <sup>3</sup> | Volume of a Right Angle Triangle |

### Area 3 - SE Corner Volume

|                       |       |                 |                                  |
|-----------------------|-------|-----------------|----------------------------------|
| Corner Length         | 6.17  | ft              | 6' 2"                            |
| Corner Width          | 6.17  | ft              | 6' 2"                            |
| Maximum Corner Height | 2.83  | ft              | 2' 10"                           |
| Volume of SE Corner   | 53.87 | ft <sup>3</sup> | Volume of a Right Angle Triangle |

**Area 4 - Pier Volume**

|                        |        |                 |                      |
|------------------------|--------|-----------------|----------------------|
| Diameter of Pier       | 2.67   | ft              | 32"                  |
| Radius of Pier         | 1.33   | ft              |                      |
| Maximum Height of Pier | 2.83   | ft              | 2' 10"               |
| Volume of Pier         | 15.82  | ft <sup>3</sup> | Volume of a Cylinder |
| Number of Piers        | 18     |                 |                      |
| Total Volumn of Piers  | 284.84 | ft <sup>3</sup> |                      |

**Total Volume**

|                                        |          |                 |                         |
|----------------------------------------|----------|-----------------|-------------------------|
| 1 - 2 - 3 - 4                          | 9,637.98 | ft <sup>3</sup> |                         |
| 7.4805 gal/ft <sup>3</sup>             | 72,097   | gallons         |                         |
| Largest Storage Tank Volume            | 65,000   | gallons         |                         |
| Min. 100% of Largest Tank Volume       | 65,000   | gallons         | 40 CFR 264.193(e)(1)(i) |
| Therefore, Adequate Containment Volume |          |                 |                         |



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## **Attachment V.C.2**

### **C-720B Tank System**

## **Attachment V.C.2**

### **Tank C-720B Report**

**OxyChem**  
**Ingleside, Texas**



ATLAS TECHNICAL CONSULTANTS LLC  
15740 Park Row Drive, Suite 200  
Houston, TX 77084  
TBPE Firm Registration No. - F-19813

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## Appendices

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| Appendix A | Equipment Drawings                       |
| Appendix B | Integrity Assessment Report              |
| Appendix C | Example Daily Inspection Form            |
| Appendix D | Secondary Containment Volume Calculation |

## 2.0 Tank System Plans and Specifications

Tank C-720B will receive the following waste streams identified in the Waste Analysis Plan (Attachment IV.D), which may contain a variety of EPA waste codes, for collection and storage prior to subsequent treatment:

- Waste oil;
- VCM heavy ends;
- VCM light ends;
- Mother liquor; and
- EDC heavy ends.

Feed systems used to transfer waste to the tank will generally consist of pumps, hard piping, connections, and controllers necessary for safe transport. Incoming wastes may be introduced into RCRA permitted storage tanks using one of two methods. The primary feed system mechanism will consist of hard piping from the production process to the storage tank. In addition to hard piping from production areas to the tank, piping (hard and/or flex) may also be used, at times, to transfer wastes associated with common tank groupings to facilitate processing and/or treatment. When flexible piping is used, it will consist of stainless steel piping with sufficient strength for the operating pressures.

Since waste streams managed in the tank may be ignitable, the tank is equipped with a nitrogen blanket in the tank headspace. All tank vents are routed to appropriate emission controls.

### 2.1 Tank

C-720B is an elevated, spherical tank with a diameter of 26 feet and nominal capacity of 65,000 gallons. Drawings for the tank are provided as Appendix A. The tank is constructed of SA516-70 carbon steel designed and constructed in accordance with American Society of Mechanical Engineers (ASME) Section VIII, Division 1 criteria. The tank is a pressure vessel with a pressure of 15 psi at 200 °F. Tanks used by OxyChem to store RCRA hazardous wastes are designed based on appropriate American Society of Testing and Materials (ASTM) grade materials and are designed based on ASME standards.

A detailed description of the tank, which contains a written assessment of the tank's structural integrity and suitability for waste handling was performed and has been prepared by an independent, qualified, registered professional engineer as required under 40 CFR 264.192, is



provided as Appendix B. The tank report, drawings, and associated integrity assessment demonstrates that the tank system has been adequately designed and has sufficient structural strength and compatibility with the waste(s) stored, to ensure that it will not collapse, rupture, or fail. The assessment considers design standards, waste characteristics, corrosion control measures, age of the system, and results of a tank integrity examination.

Wastes managed in the tank are assessed for their potential impact on the materials of the tank, pipes, valves, pumps, and other ancillary equipment. Materials of construction for the tank are then selected based on their compatibility with the wastes. Wastes are subsequently evaluated and tested, as necessary, to ensure that the wastes do not impact the integrity of the system.

Tank C-720B is aboveground and situated on a concrete foundation. As such, external shell and metal components will not come in contact with soil or water under normal conditions and corrosion is minimized.

The tank operates under a nitrogen blanketing system designed to displace any oxygen that may be present and maintains a slight pressure of nitrogen in the vapor space.

To prevent spills/overfills from the tank, the following are in place:

- Work practices, training, and procedures for operators and contractors;
- Level sensors in the tank;
- High level alarm for the tank; and
- Controllers to facilitate rapid waste shutdown.

## **2.2 Ancillary Equipment**

Ancillary equipment associated with the tank includes typical equipment (e.g., hard piping, connections, pumps, controllers, etc.) associated with the tank as well as equipment specific to the tank's use. To facilitate transfer between tanks and/or optimize operations, flexible, stainless steel, hose piping may also be used in conjunction with storage activities.

Ancillary equipment is supported (e.g., bolted, saddled, strapped, etc.) as necessary to prevent damage that could result from vibration associated with operation or from stresses that could arise from environmental factors (e.g., settlement, expansion).

## **5.5 Secondary Containment**

Secondary containment is operated and maintained to control and contain spills, leaks, other releases of hazardous wastes, water and chemical agents used to control a fire, and precipitation falling within the tank or secondary containment areas. The secondary containment volume calculation is included in Appendix D. As presented in Attachment V.A, Appendix D, the 25-year, 24-hour rainfall event for the facility is 10.1 inches, which is accounted for in the secondary containment volume calculations as required by 40 CFR 264.193(e)(1)(ii). The secondary containment volume is 72,097 gallons, which is greater than the largest tank within its boundary (i.e., 65,000 gallons) as required by 40 CFR 264.193(e)(1)(i).

Spilled hazardous wastes in the secondary containment area may be collected and transferred to a suitable tank, collected by vacuum truck, or cleaned up using absorbents which would be put into containers, for treatment and/or disposal at an authorized facility. If spilled wastes are pumped into a tank, the contents of the tank are processed, or treated and disposed of in an appropriate facility as soon as possible in order to restore capacity to the tank system.

Residues or contaminated solids generated during a cleanup or emergency will be collected and placed in appropriate containers for subsequent management at an authorized facility. These wastes are handled as hazardous, unless they can otherwise be shown to be non-hazardous by appropriate testing and regulations.

## **5.6 Containment and Liquids Removal**

Spills, leaks, or other released materials will be contained within the tank area secondary containment system. Immediately upon detection of the leak, personnel would check to ensure that the containment valves are closed and take steps to ensure that incoming flow to the affected equipment is blocked. If the leak is significant, the contents of the leaking tank will be transferred to another suitable tank or container until the level is below that of the leak. A RCRA hazardous determination will be made on spilled material and appropriate action taken.

As soon as possible, OxyChem will clean up leaks or spills of waste in secondary containment in order to reduce the potential for contamination. Under normal conditions, rainfall or other waters (e.g., wash water) collected in the secondary containment area will not be hazardous.

Therefore, collected rainfall and routine wash water will be managed as non-hazardous and discharged to the wastewater system.

Under certain conditions, it is necessary to manage rainfall/wash water as a RCRA hazardous waste:

- If a leak or spill of hazardous waste has not been cleaned up prior to a rainfall;
- If wash water is used to clean up after a leak or spill of hazardous waste; or
- If a leak or spill of hazardous waste occurs while rainfall or wash water is on the containment pad.

## **5.7 Emergency Response**

Inflows to the tank will be stopped if an emergency situation occurs involving the tank and/or ancillary equipment, including electrical or equipment failure, or fire. If necessary, the storage tanks may be cooled by using the tank farm water deluge system. Depending upon the magnitude of a spill, a layer of water will be maintained over spilled material to prevent volatilization or the spread of fires. Furthermore, water deluge may be used to flush flammable or toxic material to the secondary containment basin. Emergency response materials collected in the secondary containment basin will be handled as RCRA hazardous waste if they are classified as hazardous waste via the Mixture Rule.

## **6.0 Closure**

A closure plan, which describes the procedures that will be implemented for closure of Tank C-720B, is provided in Attachment VII.A.3. Closure cost estimates are also provided as part of the closure plan.

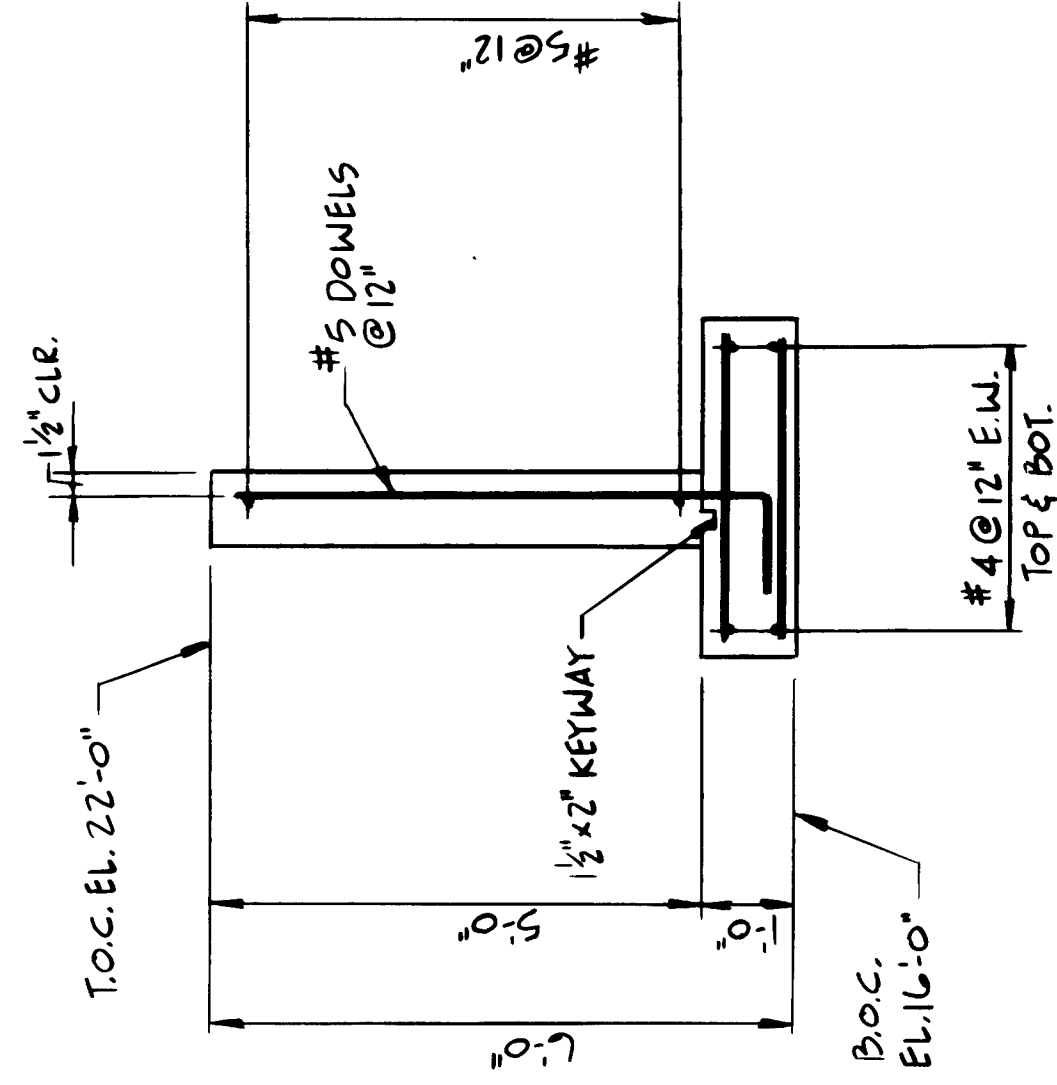
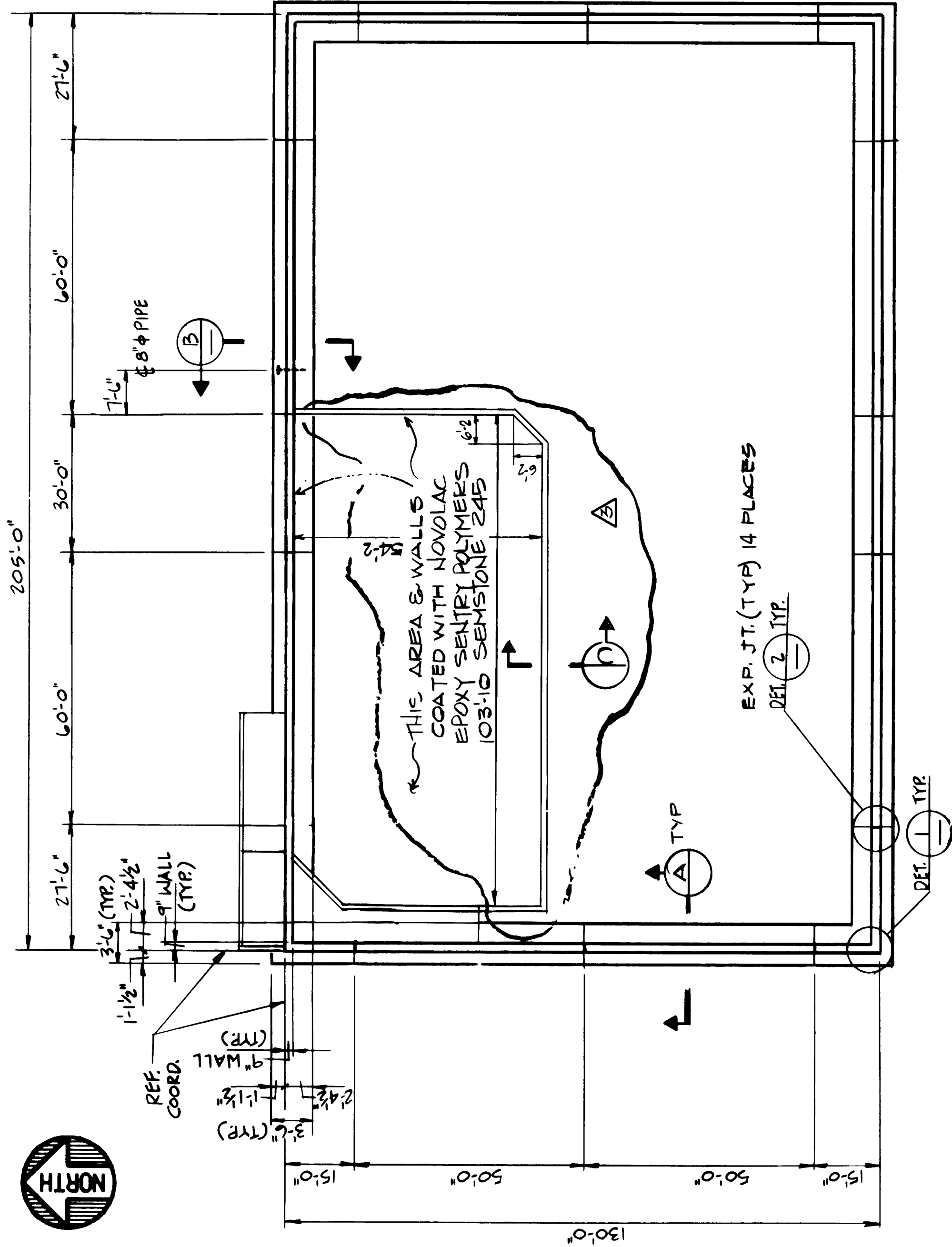
## **Appendix A**

### **Equipment Drawings**

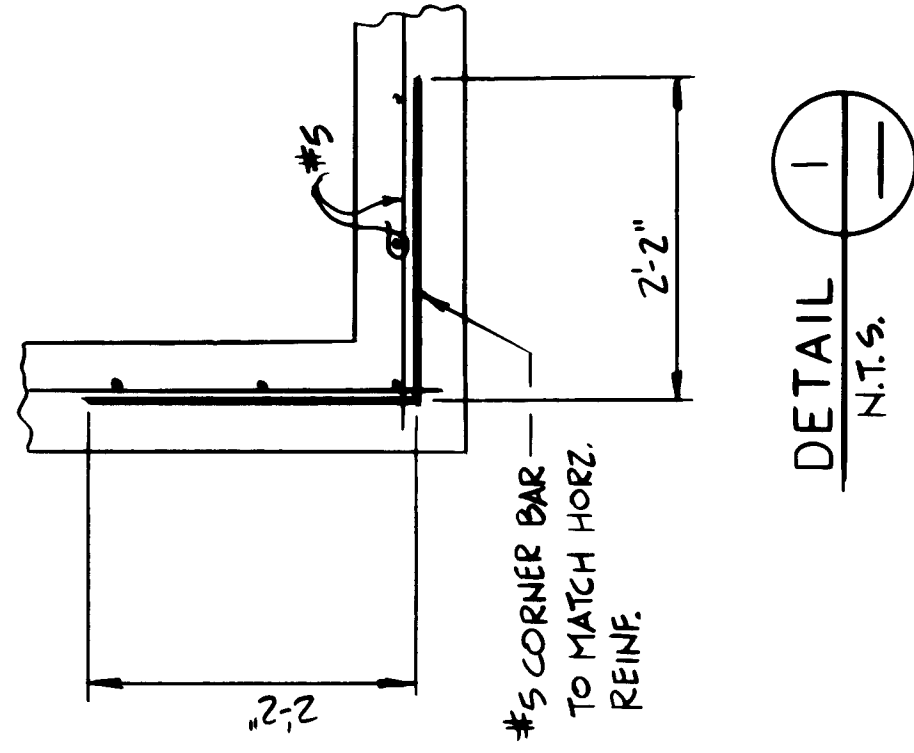
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Dwg. Record Drawing – Elevation – C-720B  
Dwg. DS-C-720, Rev. 3 – Elevation  
Dwg. 7D-80-Q-007 – Foundation for Tank  
Dwg. DS-C-720, Rev.3 – Design Requirements  
Dwg. 7D-A-004, Rev. 39 – Engineering Flow Diagram – Co-Product Storage  
Dwg. 7D-B-003, Rev. 5 – VCM Plant PFD – Co-Product Storage  
Dwg. 7D-00-Q-023, Rev. 3 – Concrete Dike – EDC Storage



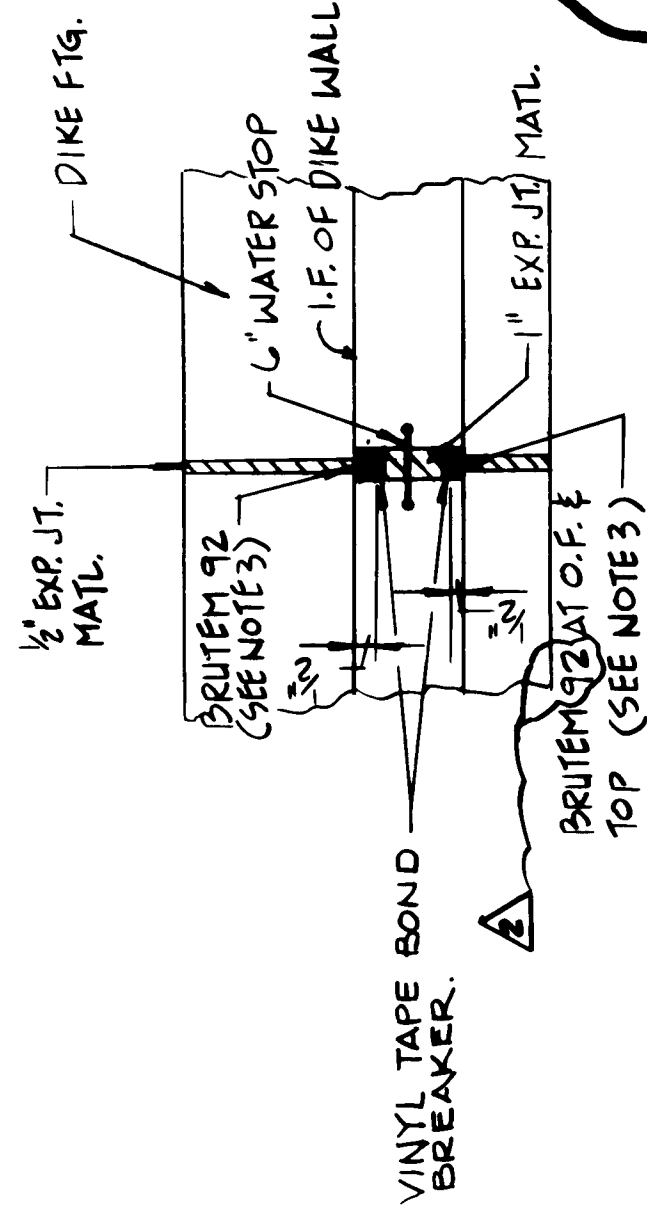
THIS DRAWING AND THE DESIGN IT COVERS ARE THE PROPERTY OF BECHTEL. THEY ARE MERELY LOANED AND ON THE BORROWER'S EXPRESS AGREEMENT THAT THEY WILL NOT BE REPRODUCED, COPIED, LOANED, EXHIBITED, OR USED EXCEPT IN THE PRIVATE USE PERMITTED BY ANY WRITTEN CONSENT GIVEN BY THE LENDER TO THE BORROWER.



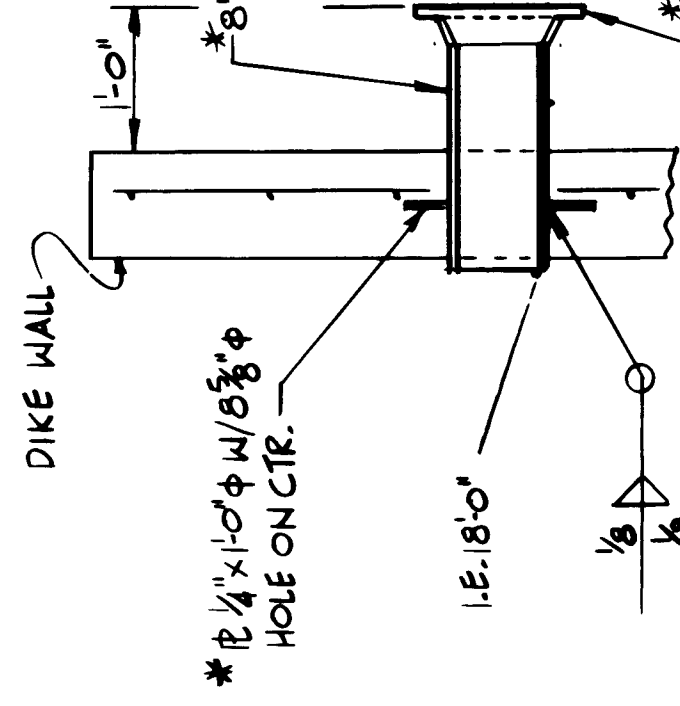
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DETAIL  
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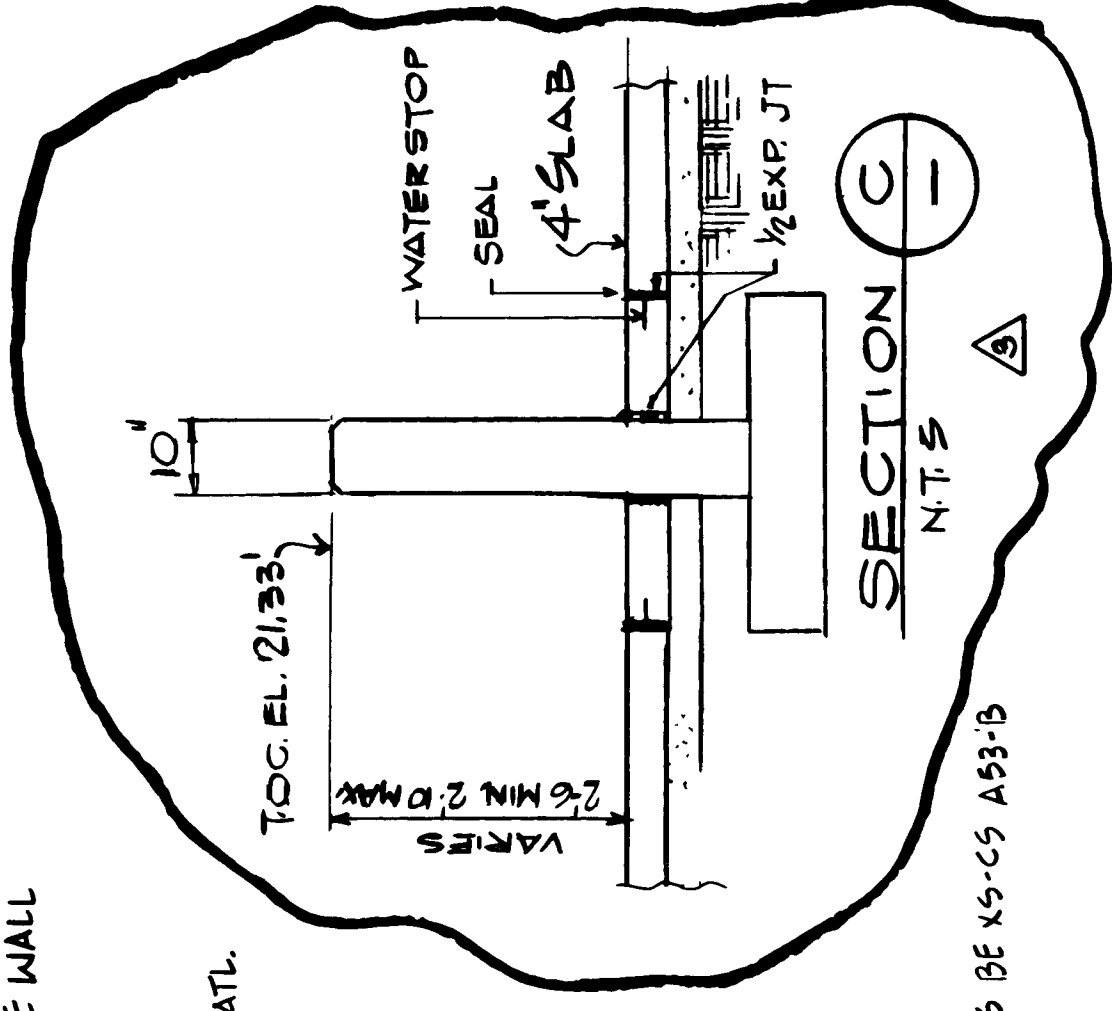


DETAIL —  
N.T.S.



SECTION \_\_\_\_\_  
N.T.S.

\* TO BE PROVIDED BY FIELD



SECTION  
N.T.S

∠\*8"-150\* RF WN FLG.(XS CS A105)  
(BOLT HOLES TO STRADDLE &)

## NOTES

- 1.) FOR LOCATION SEE PLOT PLAN DWG. 1D-00A-700
- 2.) FOR DESIGN AND CONSTRUCTION NOTES FOR REINFORCED CONCRETE SEE DWG. 00-A-Q-1
- 3.) JOINT SEALANTS TO BE BRUTEM AS MANUFACTURED BY LHM INDUSTRIES, HOUSTON TX. REFER TO NOTES 12 & 13 ON DWG. 9D-00-S-076.
- 4.) FOR PAVING SEE DWG. 9-00-S-052

## REFERENCE DRAWINGS

|                       |            |
|-----------------------|------------|
| PLOT PLAN             | 7D-00A-700 |
| DESIGN & CONST. NOTES | 00-A-Q-1   |

| NO. | DATE     | DESIGNED                       | REVISIONS | CHECK | DESIGN<br>CHECK | DATE | APPROV.<br>ENGINEER |
|-----|----------|--------------------------------|-----------|-------|-----------------|------|---------------------|
| 1   | 10/19/94 | "RCRA" DIKE AS BUILT           | DE        |       |                 |      |                     |
| 2   | 3/2/90   | REVISED EXISTANT TYPE          |           |       |                 |      |                     |
| 3   | 1/14/90  | ADDED 10"X12 TAPE BAND         |           |       |                 |      |                     |
| 4   | 1/14/90  | 10" BREXMER (DETAIL 2), NOTE 3 |           |       |                 |      |                     |
| 5   | 1/30/94  | ISSUED FOR CONST               |           |       |                 |      |                     |

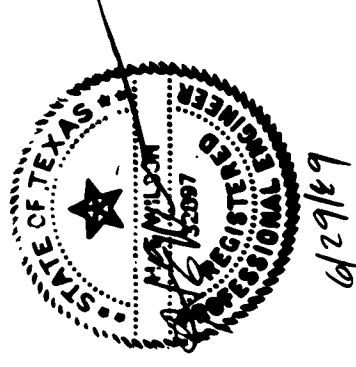
**BECHTEL, INC.**  
**HOUSTON**



**OXYMAR**  
VINYL CHLORIDE MONOMER  
CORPUS CHRISTI, TEXAS

## CONCRETE LIKE - EDC STORAGE

|                                                                                     |                  |      |             |            |      |
|-------------------------------------------------------------------------------------|------------------|------|-------------|------------|------|
|  | AREA DESIGNATION | TYPE | EWR NUMBER  | A/E NUMBER | REV. |
|                                                                                     | 19611            |      | 7D-00-Q-023 |            | 3    |





## **Appendix D**

### **Secondary Containment Volume Calculations**

### Volume of Tank C-720B Secondary Containment

#### Based On:

Dwg. 7D-00-Q-023

Dwg. 7D-80-Q-007

#### Equations

Volume of a Box = Length \* Width \* Depth (Height)

Volume of a Right Angle Triangle =  $1/2 * \text{Length} * \text{Width} * \text{Depth (Height)}$

Volume of a Cylinder =  $\pi * \text{Radius}^2 * \text{Length (Height)}$

**25-Year, 24-Hour Storm Event**                      0.84      ft                      10.1"

Required per 40 CFR 264.193(e)(1)(ii)

Source: NOAA Atlas 14, Volume 11, Version 2 - Portland, Texas - 2025-09-18

#### Area 1 - Gross Volume

|                                    |           |                 |                                     |
|------------------------------------|-----------|-----------------|-------------------------------------|
| Width of Containment Area          | 54.17     | ft              | 54' 2"                              |
| Length of Containment Area         | 103.83    | ft              | 103' 10"                            |
| Minimum Height of South Wall       | 1.66      | ft              | 2' 6" - 25-Year, 24-Hour Rain Event |
| Minimum Height Volume              | 9,326.97  | ft <sup>3</sup> | Volume of a Box                     |
| Maximum Height of South Wall       | 2.83      | ft              | 2' 10"                              |
| Height Difference                  | 0.33      | ft              | 2' 10" - 2' 6" = 4"                 |
| Volume of Sloped Height Difference | 937.38    | ft <sup>3</sup> | Volume of a Right Angle Triangle    |
| Total Gross Volume                 | 10,264.36 | ft <sup>3</sup> |                                     |

#### Area 2 - NW Corner Volume

|                       |        |                 |                                  |
|-----------------------|--------|-----------------|----------------------------------|
| Corner Length         | 14.25  | ft              | 15' 0" - 9" = 14' 3"             |
| Corner Width          | 14.25  | ft              | 15' 0" - 9" = 14' 3"             |
| Maximum Corner Height | 2.83   | ft              | 2' 10"                           |
| Volume of NW Corner   | 287.67 | ft <sup>3</sup> | Volume of a Right Angle Triangle |

#### Area 3 - SE Corner Volume

|                       |       |                 |                                  |
|-----------------------|-------|-----------------|----------------------------------|
| Corner Length         | 6.17  | ft              | 6' 2"                            |
| Corner Width          | 6.17  | ft              | 6' 2"                            |
| Maximum Corner Height | 2.83  | ft              | 2' 10"                           |
| Volume of SE Corner   | 53.87 | ft <sup>3</sup> | Volume of a Right Angle Triangle |

**Area 4 - Pier Volume**

|                        |        |                 |                      |
|------------------------|--------|-----------------|----------------------|
| Diameter of Pier       | 2.67   | ft              | 32"                  |
| Radius of Pier         | 1.33   | ft              |                      |
| Maximum Height of Pier | 2.83   | ft              | 2' 10"               |
| Volume of Pier         | 15.82  | ft <sup>3</sup> | Volume of a Cylinder |
| Number of Piers        | 18     |                 |                      |
| Total Volume of Piers  | 284.84 | ft <sup>3</sup> |                      |

**Total Volume**

|                                        |          |                 |                         |
|----------------------------------------|----------|-----------------|-------------------------|
| 1 - 2 - 3 - 4                          | 9,637.98 | ft <sup>3</sup> |                         |
| 7.4805 gal/ft <sup>3</sup>             | 72,097   | gallons         |                         |
| Largest Storage Tank Volume            | 65,000   | gallons         |                         |
| Min. 100% of Largest Tank Volume       | 65,000   | gallons         | 40 CFR 264.193(e)(1)(i) |
| Therefore, Adequate Containment Volume |          |                 |                         |



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## **Attachment V.I**

### **Boilers and Industrial Furnaces**

## **Attachment V.I.1**

### **CCIN-1 Halogen Acid Furnace**

**Attachment V.I.1**

**Boiler and Industrial Furnace Report**

**Halogen Acid Furnace CCIN-1**

**OxyChem**  
**Ingleside, Texas**



10/24/2025

ATLAS TECHNICAL CONSULTANTS LLC  
15740 Park Row Drive, Suite 200  
Houston, TX 77084  
TBPE Firm Registration No. - F-19813

Revision 2



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## 1.0 Overview

OxyChem operates two Halogen Acid Furnaces (HAFs) (CCIN-1 and CCIN-2) at their Ingleside, Texas facility. The units treat organic wastes from the vinyl chloride monomer (VCM) and ethylene dichloride (EDC) processes. CCIN-1 and CCIN-2 were originally permitted under the Boiler and Industrial Furnace (BIF) standards in 40 CFR Part 266 Subpart H. The units then became subject to the Hazardous Waste Combustor (HWC) Maximum Achievable Control Technology (MACT) standards as HAFs pursuant to the regulations specified in 40 CFR Part 63 Subpart EEE. CCIN-1 and CCIN-2 subsequently demonstrated compliance with the HWC MACT standards during a comprehensive performance test. Pursuant to 30 TAC 305.571(b), existing HAFs that have demonstrated compliance with the HWC MACT standards are not subject to the permitting and trial burn requirements of 30 TAC 305 Subchapter Q unless otherwise required by the Agency.

This BIF report has been developed as a part of OxyChem's RCRA Part B permit application for HAF CCIN-1 if permitting is required by the Agency. This report is designed to demonstrate compliance with the applicable HWC MACT performance standards of 40 CFR Part 63, Subpart EEE. These performance standards include:

- 99.99% destruction and removal efficiency (DRE) of principal organic hazardous constituents (POHC);
- Control of hydrogen chloride (HCl) and chlorine gas emissions combined to 150 ppmv, expressed as chloride (Cl<sup>-</sup>) equivalent, dry basis (corrected to 7% oxygen);
- Control of particulate matter (PM) emissions based on complying with the HCl and chlorine gas standard;
- Control of mercury emissions based on complying with the HCl and chlorine gas standard;
- Control of combined semivolatile metal (Cd and Pb) emissions based on complying with the HCl and chlorine gas standard;
- Control of combined low-volatility metals (As, Be, and Cr) emissions based on complying with the HCl and chlorine gas standard;
- Control of carbon monoxide emissions to 100 ppmv or less on an hourly rolling average (HRA) dry basis (corrected to 7% oxygen);
- Control of total hydrocarbons emissions to 10 ppmv or less on an HRA dry basis (corrected to 7% oxygen); and
- Control of dioxin/furan emissions based on complying with either the carbon monoxide or hydrocarbon emission standard.

OxyChem prepared a comprehensive performance test (CPT) plan under the Hazardous Waste

Combustor MACT for the initial CPT test. That plan was reviewed by EPA, implemented, and results reported to EPA to demonstrate compliance. Via letter dated July 1, 2014, EPA accepted the notice of compliance and CPT report and concluded that it demonstrated compliance with 40 CFR Part 63, Subpart EEE. All limits were incorporated into OxyChem's air permit authorizing emissions from the HAF. Accordingly, no additional trial burn/CPT information is presented in this application.

## **1.1 Organization of Report**

This report is organized as follows:

- Section 1 - Overview (Overview of performance standards and waste treatment process);
- Section 2 - Wastes to be Treated;
- Section 3 - Description; and
- Section 4 - References.

## **1.2 Waste Treatment System Process and Feed Descriptions**

The facility site plan showing the location of the unit is illustrated on Drawing 9D-00A-900 in Appendix A.

HAF CCIN-1 consists of three primary process areas:

1. Furnace;
2. HCl Absorber; and
3. Air Pollution Control System (APCS).

The furnace consists of a firebox followed by a flue gas cooler/waste heat boiler, which is designed to destroy greater than 99.99% of hazardous organic constituents in the feed streams and to produce plant steam. The HCl recovery unit produces acid which can be used on-site for pH control in the VCM process and wastewater treatment systems. The APCS originally consisted of a two-column scrubber system followed by a knock-out drum.

Modifications were made to the APCS to incorporate two additional components: a wet electrostatic precipitator (WESP) and a catalytic oxidizer. These enabled OxyChem to meet the HWC MACT performance standards.

The basic flow of materials through the combustion system is illustrated on Drawing 5D-B-010 in Appendix A. Descriptions of the discrete components follow in this section, and Section

3 provides a more detailed description of OxyChem's combustion system.

### **1.2.1 Waste Storage**

All of the liquid hazardous wastes and vent streams treated in the HAF are generated on-site or off-site at other OxyChem facilities. Prior to being pumped to the HAF for treatment, these process wastes are stored in RCRA-permitted tanks (C-720A and C-7208). Hazardous waste oil and "mother liquor" may occasionally be blended into either tank prior to combustion.

In addition, vents from these two RCRA tanks, vents from other tanks in the EDC and VCM storage areas, as well as vents in the EDC, VCM, and Plant 2 process areas are also routed to the HAF for treatment.

Since wastes from the EDC and VCM production processes are of consistent composition, there is not a need to test each tank prior to treatment in the HAF. Periodic sampling and analysis of waste feed streams takes place as described in the facility Waste Analysis Plan.

Based on process and storage needs, wastes are pumped from each tank independently to the HAF.

### **1.2.2 Combustion System**

The CCIN-1 and CCIN-2 HAFs are identical and were designed and fabricated by Bigelow-Liptak Corporation. The units operate in a horizontal flow configuration and have demonstrated 99.99% DRE of organic constituents. The size, burner capacity, and thermal capacity of the unit is provided in Section 3.0. Drawing 5D-00-A-500 in Appendix A provides a plot plan for the CCIN-1 and CCIN-2 HAFs.

Organic wastes, vent gases, and natural gas are fed as fuel along with combustion air and atomizing steam into the feed end of the firebox. Originally, the HAF utilized a single induced draft (ID) fan to provide motive force to transport the combustion gas through the combustor. As part of the modifications made for HWC MACT, an additional ID fan was added following the APCS to assist in this function.

Combustion gases in excess of 1700 °F enter the waste heat boiler from the HAF, which generates process steam for on-site use.

### **1.2.3 HCl Absorber**

The furnace is followed by an absorber system which removes HCl from the combustion gases.

### **1.2.4 Air Pollution Control System (APCS)**

Combustion gases from the furnace, waste heat boiler, and HCl absorber are treated to remove particulate matter, trace metals, chlorine, and dioxins prior to being emitted to the atmosphere. The APCS originally had the following major components:

- Dehumidifier and caustic scrubber; and
- Knock-out drum.

After modifications were made for HWC MACT compliance, the APCS now also includes downstream of the knock-out drum the following components:

- WESP; and
- Catalytic oxidizer.

Combustion gas is vented to the atmosphere through a 125-ft stack, which was also installed as part of the APCS modifications.

More complete information on the APCS is provided in Section 3.9.

### **1.2.5 Blowdown Treatment**

The APCS blowdown is routed to the plant waste water treatment system. The blowdown normally contains total dissolved solids (TDS) and total suspended solids (TSS).



## 2.0 Wastes Treated

In the EDC and VCM processes OxyChem generates five separate hazardous organic waste streams that may be treated through combustion in the HAF, which are as follows:

- VCM plant light ends;
- VCM plant heavy ends;
- EDC plant heavy ends;
- Mother liquor; and
- Hazardous waste oil.

Table 2-1 lists the characteristics of these waste streams.

OxyChem does not produce or handle any products containing polychlorinated biphenyls (PCB) that could be regulated under the Toxic Substance Control Act (TSCA). OxyChem does not generate any waste materials that are designated as F020, F021, F022, F023, F026, or F027 wastes (dioxin waste codes). Non-pumpable waste streams are not fed to the furnace.

The wastes that are burned in the furnace are generated continuously in the VCM and EDC processes. The composition of the organic wastes does not vary significantly over time. In addition, the characteristics of the organic wastes generated in the VCM and EDC processes have similarities.

Refer to the Waste Analysis Plan for additional information on the wastes. OxyChem has explored and continues to look for additional ways to recover and reuse as much of its wastes as is practicable. Prior to being sent to tanks C-720A and C-720B, reaction byproducts undergo numerous recovery and separation stages at the individual processes to recover product, raw materials, and solvents.

### **3.0 Unit Description**

The following sections provide a detailed description of the HAF system. A complete set of process flow diagrams (PFDs) and equipment arrangements are provided as Appendix A. The design parameters for major components of the combustor are summarized in Table 3-1. The combustor equipment drawings (Appendix A) and specifications were prepared by OxyChem engineering.

#### **3.1 Description of HAF**

The combustion system consists of the firebox (combustion zone) and the waste heat boiler. The furnace and waste heat boiler are oriented to each other as shown in Drawing 5D-00-A-500 in Appendix A.

##### **3.1.1 Combustion Zone**

Combustion of organics takes place in the firebox. The firebox was fabricated by Bigelow-Liptak Corporation with the dimensions presented in Table 3-1. The design has no model number.

The firebox is made of carbon steel and designed for 34 million Btu/hr heat release.

The firebox has field-installed refractory consisting of 7 to 9 inches of firebrick. The unit is designed for a maximum operating temperature of 2,400 °F. The temperature is automatically controlled by reducing excess combustion air and/or the addition of natural gas to maintain a temperature greater than 1,700 °F.

The temperature is measured with a thermocouple at the exit of the combustion chamber. Interlocks are installed to initiate an emergency shutdown of the furnace should temperatures in excess of 2400 °F be experienced. Conversely, waste liquid feed is automatically cut-off if the temperature falls below the permitted minimum. Firing controls for CCIN-1 are shown in Appendix A.

##### **3.1.2 Waste Heat Boiler**

Hot combustion gases at approximately 1,700 - 2,400 °F pass from the firebox through a 6-foot 9-inch inner-diameter, refractory-lined duct to the flue gas cooler. The flue gas cooler is a fire-tube, waste-heat boiler that is made of carbon steel with refractory on the inlet channel and upstream tube sheet. The unit has a design heat duty of 29.3 million Btu/hr and generates 28,300 lb/hr of 250 psig steam. Combustion gases exit the cooler at approximately 400°F.

The waste heat boiler and steam drum are shown in Appendix A.

### **3.2 Nozzle and Burner Design**

Liquid organic waste is fed into the firebox through a single-burner assembly consisting of four waste-liquid injection guns, seven vent-gas nozzles, a spark-ignited pilot, and a single natural gas burner for auxiliary fuel.

Normally, only one or two waste liquid injection nozzles are used at a time for the furnace. The liquid feed flow rate is monitored and automatically controlled. Waste atomization is achieved by the addition of steam to each of the injection nozzles.

Downstream of the vent flow meter, the vent header enters an 8-inch diameter, Teflon-lined, bustle ring. Vent gases pass from the bustle ring into the firebox burner assembly through seven, 2.5-inch diameter vent nozzles located around the outer circumference of the burner assembly.

The pilot, which is always on during normal operation, is a Maxon premix type with a spark igniter.

Combustion air is supplied directly into the burner unit through a 2-foot square inlet, which is mounted vertically behind the burner.

### **3.3 Description of the Auxiliary Fuel Systems**

Drawings in Appendix A show the fuel train for the combustion system. Natural gas is the only support fuel used for the furnace. Up to 20 MMBtu/hr of natural gas can be fired through a single burner. The flow of natural gas is varied to control the firebox temperature.

### **3.4 Capacity of Prime Mover**

Combustion air is drawn into the combustion chamber by the action of an induced-draft fan, located downstream of the caustic scrubber. With the added HWC MACT equipment, air flow is also maintained by a second induced-draft fan located downstream of the catalytic oxidizer. The materials of construction for these fans are listed in Table 3-1.

Air is introduced to the burner through a screened vent, and air flow is controlled by the temperature control damper, which is upstream of the acid absorber.

Under normal operation, air flow is adjusted to maintain temperature, and natural gas is adjusted to maintain minimum temperature. However, if there are still insufficient heat releases, air flow may be reduced, as needed, to maintain firebox temperature. When firing little or no liquid waste, natural gas flow may be maximized. A mechanical stop on the damper prevents it from reducing air flow below a level that would maintain combustion at about 40% of the design rate. This minimum air flow rate corresponds to the maximum fuel gas rate.

A small amount of air is introduced into the pilot line by a Maxon premix blower. The blower is made of carbon steel and has an associated motor.

### **3.5 Description of Waste Feed Systems**

There are three primary liquid hazardous waste streams that are destroyed in the HAF: VCM plant heavy ends (VCM HE), VCM plant light ends (VCM LE), and EDC plant heavy ends (EDC HE). The VCM HE and VCM LE are generated as a result of VCM production. EDC HE is generated at the EDC plant. Also, hazardous waste oil and mother liquor are occasionally generated. These two streams are blended with the other waste streams prior to combustion.

The heavy ends normally are combusted separately from the light ends. However, it is possible that they may occasionally be combined into one stream.

#### **3.5.1 Liquid Wastes Delivery**

The flow of liquid feeds to the furnace is continuously monitored and recorded. The feed line is equipped with a mass flow meter and an automatic waste feed cut-off valve. The waste liquid feed flowrate is set manually, but the temperature controller can automatically override the liquid waste feed controller and reduce the liquid waste feed to maintain the firebox temperature below a temperature necessary for equipment safety.

Downstream of the flow monitor, the liquid waste feed line is connected to a header. The furnace includes four liquid waste burners that receive feed from this header. Each burner is atomized with steam. Typically, only one or two burners are in operation at a time. A description of the burner nozzles is presented in Section 3.2.

#### **VCM Plant Heavy Ends**

The VCM HE is pumped from a 65,000 gallon RCRA permitted storage tank to the burner unit. The VCM HE delivery pump is a centrifugal pump. Average production rate of the VCM

HE is 6,400 lb/hour.

### **VCM Plant Light Ends**

The VCM LE is pumped at ambient temperature from a 65,000 gallon RCRA permitted storage tank. The delivery pump is a centrifugal pump. Average production rate of the VCM LE is about 1,000 lb/hr.

### **EDC Plant Heavy Ends**

The EDC HE, which is generated at a rate of approximately 140 lb/hr, is transferred to one of the 65,000 gallon RCRA permitted tanks to the HAF.

### **Waste Oil**

Waste oil is periodically generated at different areas within the plant and is normally disposed of off-site. However, it may be collected and blended into one of the RCRA-permitted tanks.

### **Mother Liquor**

Mother liquor is periodically generated at different areas within the plant, and is normally disposed of off-site. However, it may be collected and blended into one of the RCRA-permitted tanks.

## **3.5.2 Vent Gases**

Process vent gases are collected in a 10-inch Teflon-lined header. Entrained liquid is removed in a knock-pot before the header splits to the furnace. The split between the two HAFs (CCIN-1 and CCIN-2) is adjusted by a manual loading valve in the feed line. Vent flow is metered and monitored in the control room. Average vent flow is typically about 500 SCFM to the unit. Nitrogen is automatically added to maintain a minimum vent flow of 300 SCFM to prevent a flashback in the vent line.

## **3.6 Fugitives Control**

The HAF operates under an induced draft from the fans, which maintains a negative pressure. The feed of liquid waste is automatically cut-off if the pressure in the firebox is greater than or equal to atmospheric pressure.

### 3.7 Description of Automatic Waste Feed Cutoff System

The automatic waste feed cutoff (AWFCO) system interlocks to prevent feeding liquid hazardous waste if the HAF operating conditions are outside the RCRA permit limits. The AWFCO system resides in the distributed control system (DCS). During startup and shutdown of the HAF or during process upsets, the interlock system automatically stops hazardous liquid waste feed systems and prevents their restart until the HAF is at proper operating conditions, and the interlock is reset by the DCS operator. The process controller adjusts auxiliary fuel feed (natural gas) to the waste burners upon any AWFCO event in order to maintain the firebox temperatures.

Descriptions of process monitoring instruments that are interlocked with the AWFCO system under the RCRA permit and their instrument ranges are included in Section 3.12. OxyChem's RCRA Part B permit requires the AWFCO system and associated alarms that would initiate the cut-off to be tested at least weekly to verify operability. To clarify this it says, "All associated alarm test circuits shall be activated to demonstrate circuit continuity." The DCS performs the test for all the alarm circuits almost continuously.

Alarm checking is a task performed within the DCS. When an alarm point is reached, the programmable logic controller (PLC), which hosts the emergency shutdown system functions including waste feed cutoff valves, firebox burner management, etc., will first initiate any interlock actions that may be required. Then the PLC will send the "shutdown alarm" signal along the universal control networks (UCN) to the network interface module (NIM). Any process alarms are sent from the high performance process manager (HPM), which hosts functions such as PID control, valve outputs, etc., to the NIM. The NIM then assigns an alarm priority and sends out the alarm on the local control network (LCN) to any and all devices that need the information. The universal station (operator station) will receive the alarm signal and notify the operator by sounding an audible alarm and a LED indication light for the unit with the alarm.

Alarm management at this point is very similar to the analog alarm annunciator boards. The operator can silence the alarm and then acknowledge the alarm.

The alarm circuit path described above is continuously checked through extensive diagnostic programs on several computer devices. If a failure is found, as stated above, an alarm is sent to the operator immediately and, where appropriate, the system takes action to avert a problem that may be caused by the malfunction. On a weekly basis, this system is monitored at the universal station.



For greater detail of the DCS and circuit continuity checks, see Appendix B, which details procedures for testing alarm operability.

### 3.7.1 Emergency Shutdown Procedures

The emergency shutdown system consists of instrumentation that is designed to keep the HAF from operating at conditions that could endanger personnel, damage the equipment, or lead to unacceptable emissions to the atmosphere. Three types of actions may result from operating conditions deviating beyond pre-defined limits. These actions are: 1) total system shutdown; 2) total flame shutdown; and 3) waste liquid feed cutoff. The HAF operating conditions that lead to the three types of emergency actions are described below.

#### 3.7.1.1 Total Shutdown

A total shutdown automatically terminates all burning in the firebox. The waste liquid, vent gases, and natural gas are shut off to the firebox. In addition, the induced draft fan and pilot premix blower are both shutdown. The following conditions cause a total shutdown:

| <b>Total System Shutdown Parameter</b> | <b>Cut-Off Limit/Condition</b> |
|----------------------------------------|--------------------------------|
| Low steam drum level                   | 10%                            |
| High absorber bottom temperature       | 200 °F                         |
| High absorber liquid level             | 90%                            |

#### 3.7.1.2 Total Flame Shutdown

A total flame shutdown automatically terminates all burning in the firebox. The waste liquid, vent gases, and natural gas are shut off to the firebox. The induced draft fan and pilot premix blower continue running to purge the system of any corrosive and combustible material. The following conditions cause a total flame shutdown.

| <b>Total Flame Shutdown Parameter</b>  | <b>Cut-Off Limit/Condition</b> |
|----------------------------------------|--------------------------------|
| High natural gas pressure <sup>a</sup> | 25 psig                        |
| Low natural gas pressure <sup>a</sup>  | 5 psig                         |
| High pilot gas pressure                | 9" water                       |
| Low pilot gas pressure                 | 3" water                       |
| Low pilot mixer pressure drop          | 2" water                       |
| Low blower suction draft               | 10" water                      |

|                          |              |
|--------------------------|--------------|
| Low firebox draft        | -0.05" water |
| High firebox temperature | 2,400 °F     |
| Loss of flame detection  | Absence      |

a – In this case, vents and liquid waste are shut off, but the pilot gas continues to operate.

### 3.7.1.3 Waste Liquid Feed Cutoff

Hazardous waste liquid feed to the firebox is automatically shut off due to the conditions detailed below. The HAF continues to run on natural gas to combust vent gases. These limits and conditions reflect AWFCO requirements for the OxyChem hazardous waste HAF.

| <b>Automatic Waste Feed Cutoff Parameter</b> | <b>Cut-Off Limit/Condition</b>                             |
|----------------------------------------------|------------------------------------------------------------|
| Low Firebox Temperature                      | < 1,787 °F (Hourly Rolling Average)                        |
| Maximum Liquid Waste Feed Rate               | > 5,815 lb/hr (Hourly Rolling Average)                     |
| Maximum Chloride Feed Rate                   | > 3,574 lb/hr (12-Hourly Rolling Average)                  |
| Minimum Caustic Scrubber Liquid to Gas Flow  | < 12.44 gpm/kscfm (Hourly Rolling Average)                 |
| Minimum Caustic Scrubber Recycle pH          | < 8.91 (Hourly Rolling Average)                            |
| Maximum Stack Gas Flow                       | > 21.63 kacf (Hourly Rolling Average)                      |
| Maximum Combustion Chamber Pressure          | > 0 in. wc (Instantaneous)                                 |
| Maximum Stack Gas CO Concentration           | ≥ 100 ppm dry @ 7% O <sub>2</sub> (Hourly Rolling Average) |
| Minimum Waste Atomization Steam Pressure     | < 64 psig (Instantaneous)                                  |
| Minimum Caustic Scrubber Recycle Pressure    | < 7.0 (Hourly Rolling Average)                             |

In addition, the waste feed cut-off system activates under any of the following conditions:

- Electrical power outage;
- Liquid injection system flame-out;
- Loss of flame in the combustion chamber;
- Loss of instrument air;
- Shutdown of main induced draft fan;
- Loss of waste atomizing fluid;
- Loss of combustion air;
- Failure of computer monitoring system; or
- Malfunction of pollution control system.

Final AWFCO parameter values for permitted operation under 40 CFR Part 63 Subpart EEE and additional State of Texas requirements are expected to be negotiated between the TCEQ and OxyChem based on the results of subsequent CPT tests.

### **3.8 Stack Gas Monitoring**

Continuous emissions monitoring systems (CEMS) are used to monitor stack gases continuously for carbon monoxide and oxygen concentrations. Continuous emissions monitor ranges are listed in Table 3-2.

The CO and O<sub>2</sub> CEMS meet all of the performance specifications detailed in 40 CFR Part 60, Appendix B, Performance Specification 4B and the data analysis and recording requirements in 40 CFR Sections 63.8(c)(4) and 63.8(g). Dedicated sample ports for the CEMS probes are located in the stack.

If any CEM system ceases to operate correctly, or if a zero and span procedure for an analyzer exceeds 20 minutes in duration, the liquid waste feed must be cut-off.

### **3.9 HCl Absorber**

The HCl absorber is designed primarily to recover HCl from the combustion gases for reuse in other processes at the plant. The HCl absorber is a packed column constructed of rubber-lined carbon steel covered with an acid-brick lining. The dimensions of the absorber are included in Table 3-1.

Gases from the waste-heat boiler are introduced into the absorption column through a 47-inch inner-diameter inlet that is lined with refractory. Water from the plant and occasionally blowdown from the dehumidifier are introduced at the top of the column, immediately cooling the combustion gases to about 150 °F in this section.

Water is pumped from the bottom of the column. The acid is normally recycled to the quench section and to the lower bed. Excess acid from the bottom of the column is cooled in a graphite cooler and used on-site for pH control in the VCM process and wastewater treatment system.

Excess acid is neutralized with limestone, caustic, or other alkaline streams in the plant's wastewater treatment system. A drawing showing the HCl absorber unit for CCIN-1 is provided in Appendix A.

### **3.10 Air Pollution Control System Equipment**

#### **3.10.1 Overview**

As described in Section 3.0, the APCS originally had the following major components:

- Dehumidifier and caustic scrubber; and
- Knock-out drum.

After modifications made for HWC MACT compliance, the APCS now includes the following components located downstream of the knock-out drum:

- WESP; and
- Catalytic oxidizer.

Combustion gas is vented to the atmosphere through a 125-ft stack.

#### **3.10.2 Dehumidifier and Caustic Scrubber**

Gases exiting the HCl recovery system enter the first of two spray scrubber columns (a dehumidifier column), which is followed by a caustic scrubber column. Dimensions and materials of construction for the unit are included in Table 3-1. A drawing showing the scrubber for CCIN-1 is provided in Appendix A.

Gases (at approximately 149°F) from the HCl recovery system are introduced at the top of the dehumidifier column. Gases are cooled to about 113 °F and are dehumidified by co-current direct contact with water that is recycled from the caustic scrubber. Sodium hydroxide is added to maintain the pH of the scrubbing water above 8 and absorb chlorine and HCl from the flue gases. Sodium thiosulfate or sodium bisulfite is injected into the scrubbing water to complete conversion of the Cl<sub>2</sub> to chloride. The average flow rate of water to the dehumidifier is 700 gpm. Dehumidifier bottoms are cooled to 100 °F and recycled to the caustic scrubber. A small amount of blowdown is removed from the scrubber to purge salts from the scrubbing water system. Softened water is added to the caustic scrubber on level control to make up for blowdown losses.

Gases from the dehumidifier pass through a 36-inch diameter FRP pipe to the caustic scrubber. Inside the scrubber, spray nozzles discharge water that consists primarily of cooled bottoms from the dehumidifier column. Similar to the dehumidifier column, sodium hydroxide is added to raise the pH of the scrubbing water above 8.

### **3.10.3 Knock-Out Drum**

The knock-out drum receives combustion gases from the caustic scrubber at approximately 100°F. Dimensions and materials of construction for the knock-out drum are included in Table 3-1. The knock-out drum serves to separate entrained moisture from the combustion gases. The collected water flows by gravity to the caustic scrubber bottoms stream, which is then pumped to the dehumidifier column. A drawing showing these components for CCIN-1 is provided in Appendix A.

### **3.10.4 Wet Electrostatic Precipitator**

The WESP is a device that was installed to remove sub-micron sized PM and metals from the gas stream. The design for the WESP is a down-flow, tubular-component vessel that uses saturated inlet gas as the irrigation medium. Dimensions and materials of construction for the WESP are included in Table 3-1. A drawing showing the flow diagram for the WESP associated with CCIN-1 is provided in Appendix A.

As gases enter the vertical collecting tubes, a high-intensity corona charges the water vapor, PM, and condensed metals. Charged particles and water vapor mist migrate to the collecting tube walls to form the irrigation film draining by gravity down the tube. The corona is produced by a discharge electrode which is centered in each collecting tube.

The WESP is designed for a 95% removal efficiency for particulate matter to meet or exceed the MACT requirements for emissions of semi-volatile metals and low volatile metals.

Periodically, the WESP requires flushing with an external source of water. A WESP wash water tank stores water required for the WESP on CCIN-1. Water from this tank is pumped to the WESP on a timed basis. Dimensions and materials of construction for the WESP wash water tank are included in Table 3-1.

A separate WESP water drain tank for the WESP is used to collect the flush water from the WESP. The WESP water drain tank is sized to contain two wash cycles assuming no pump out. This water is routed to the waste water treatment system (WWTS). Dimensions and materials of construction for the WESP water drain tank is included in Table 3-1.

### **3.10.5 Heat Exchangers, Preheaters, and Catalytic Oxidizer**

Saturated gas leaving the WESP passes through a steam-heated superheater to raise the temperature from 129 °F to 155 °F, which is above the dew point. Superheated gas then passes through the cold side of the cross exchanger. The cross exchanger is a gas-to-gas heat exchanger that partially preheats feed to the catalytic oxidizer by recovering heat from the stream leaving the catalytic oxidizer.

Gas leaving the cross exchanger is sent to the catalytic oxidizer pre-heater, which is a natural gas fired heater designed to raise the gas above the 420 °F (450 °F used for design) minimum inlet temperature required for the catalytic oxidizer. Approximately 40 scfm of natural gas is required.

The catalytic oxidizer is a vapor phase dioxin/furan (PCDD/F) destruction device based on established selective catalytic reduction (SCR) technology used for NO<sub>x</sub> control. Hot preheated gas is passed through a cubical vessel containing a grid of honeycomb catalyst layers. The catalytic oxidizer is designed to destroy in excess of 96% of the vapor phase PCDD/F based on an inlet of 10 ng/dscm TEQ at 7% O<sub>2</sub> reducing to an outlet concentration of no more than 0.3 ng/dscm TEQ. Treated gases leaving the catalytic oxidizer are sent to the hot side of the cross exchanger to partially preheat incoming feed.

Dimensions and materials of construction for the super heater, cross exchanger, preheater, and catalytic oxidizer, are included in Table 3-1. Drawings for the super heater, cross exchangers, preheater, and catalytic oxidizer are provided in Appendix A.

### **3.10.6 Vent Stack**

Historically, combustion gases from the knock-out drum were drawn into the induced-draft blower and discharged to the vent stack.

As a result of HWC MACT upgrades, treated gases exiting the cross exchanger hot side are sent to the suction of a new ID fan, which provides motive force to pull the gases through the new equipment. The ID fan discharges to a new 3.5 feet diameter stack that is 125 feet tall.

There are two sampling ports located on the new stack, which are located 90 degrees apart from each other and are accessible from a sampling platform. Stack gases are monitored for carbon monoxide and oxygen.



### **3.11 Construction Materials**

Construction materials for the HAF components are specified in Table 3-1

### **3.12 Location and Description of Temperature, Pressure, and Flow Indicating and Control Devices**

Locations of process control instruments are provided in the unit process flow diagrams (Appendix A). This section provides a general description of temperature, pressure, flow, and other instrumentation requirements necessary to ensure compliance with all permit conditions. A discussion of the major controls for the HAF that are linked to the DCS is also provided. There is a separate PLC for burner management that communicates with the DCS. Section 3.7.1.3 presents the parameters that are used to monitor plant operations and record data for the facility operating record and test burns. Instrument calibration is performed according to manufacturer's specifications.

The DCS controls the HAF operations. A description of the primary control loops follows. AWFCO functions for each control are discussed in Section 3.7.

#### **3.12.1 Waste Feed Rate Control**

A mass flow meter in combination with the DCS maintains a continuous record of the hazardous waste feed rate to the furnace. The feed rate of chlorine and ash during operations may be calculated by multiplying this feed rate by the parameter concentration measured following the Waste Analysis Plan.

The total and average heat input values for the feeds to the HAF are calculated in the DCS by a heat balance around the waste heat boiler.

#### **3.12.2 Combustion Chamber Gas Temperature and Burner Controls**

Firebox temperature is controlled by modulating air flow, natural gas flow rate, or the waste to the burners

Thermocouples record combustion temperature in the exit from the firebox. Temperature recorders and temperature indicators in the DCS continuously monitor the process.

Natural gas feed rate to the burner is measured with a vortex meter prior to the feed nozzle. Natural gas pressure (a permitted AWFCO) is measured with an electronic differential pressure transmitter switch.

Atomizing steam pressure, a permitted AWFCO, is measured using a differential pressure transmitter on the steam header to the nozzles.

### **3.12.3 HCl Absorber Packed Bed Inlet Gas Temperature**

Inlet temperature to the HCl absorber packed bed is measured with a thermocouple. Temperature indicators in the DCS continuously monitor the process. If a high temperature is detected, the alarm is activated.

### **3.12.4 Quench Chamber Water Flow Rate**

The flow rate of water to the quench chamber nozzles (a permitted AWFCO) is measured using magmeters or vortex meters on the quench inlet line to the feed nozzles.

### **3.12.5 Scrubber Recycle pH**

The pH of the caustic scrubber recycle liquor is monitored by means of a pH probe in the bottom effluent from the caustic scrubber. Caustic is added, as necessary, to maintain the desired pH.

### **3.12.6 WESP Transformer/Rectifier (T/R) kVA**

The T/R control displays primary and secondary voltage. The control panel sends voltage information to the DCS where the HRA secondary kVA interlock is initiated.

### **3.12.7 Stack Gas Oxygen and Carbon Monoxide Levels**

Stack gas emission levels are measured by means of parameter specific stack gas analyzers as described in Section 3.8.

### **3.13 Combustion Gas Flow Rate**

Combustion gas flow rate is measured with a flow monitor that is mounted on the new exhaust stack.

## **4.0 Closure**

A closure plan, which describes the procedures that will be implemented for closure of HAF CCIN-1, is provided in Attachment VII.A.4. Closure cost estimates are also provided as part of the closure plan.

## 5.0 References

U.S. Environmental Protection Agency (EPA). "Guidance Manual for Hazardous Waste Incinerator Permits." Office of Solid Waste, Washington, D.C. March 1983.

U.S. EPA. "Guidance on Setting Permit Conditions and Reporting Trial Burn Results." Hazardous Waste Incineration Guidance Series, Volume II. Office of Solid Waste. Washington D.C. EPN625/6-89/019. January 1989.

U.S. EPA. "BIF Technical Implementation Document." Washington, D.C. EPA-530-R-92-011. March 1992.

U.S. EPA. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods." Washington, D.C. SW-846. Update III. December 1996.

U.S. EPA. "Protocol for Human Health Risk Assessment at Hazardous Waste Combustion Facilities." EPA-R6-098-002. Center for Combustion Science and Engineering, Multimedia Planning and Permitting Division, U.S. EPA Region 6. Dallas, Texas. January 1998a.

U.S. EPA. "Protocol for Screening Level Ecological Risk Assessment at Hazardous Waste Combustion Facilities." EPA-R6-098-003. Center for Combustion Science and Engineering, Multimedia Planning and Permitting Division, U.S. EPA Region 6. Dallas, Texas. January 1998b.

## Tables

**Table 2-1 Stream Characteristics**

| <b>Component</b>                                                            | <b>VCM<br/>HE</b> | <b>VCM<br/>LE</b> | <b>EDC<br/>HE</b> | <b>Hazardous<br/>Waste Oil</b> | <b>Mother<br/>Liquor</b> |
|-----------------------------------------------------------------------------|-------------------|-------------------|-------------------|--------------------------------|--------------------------|
| <b>Organic Hazardous Air Pollutants (HAPs) Concentration Ranges (wt. %)</b> |                   |                   |                   |                                |                          |
| Vinyl Chloride Monomer                                                      | -                 | 0-5               | -                 | -                              | -                        |
| Carbon Tetrachloride                                                        | -                 | 0-15              | -                 | -                              | -                        |
| Chloroform                                                                  | 0-5               | 0-100             | -                 | -                              | -                        |
| Chloroethane                                                                | -                 | 0-10              | -                 | -                              | -                        |
| 1,1,2,2-Tetrachloroethane                                                   | 5-25              | -                 | -                 | -                              | <1                       |
| Trichloroethylene                                                           | 0-2               | 0-5               | -                 | -                              | <2                       |
| 1,1,1-Trichloroethane                                                       | 0-5               | -                 | -                 | 0-5                            | -                        |
| 1,1,2-Trichloroethane                                                       | 0-90              | -                 | 5-30              | -                              | <1                       |
| 1,1-Dichloroethane                                                          | -                 | 0-30              | -                 | -                              | -                        |
| 1,2-Dichloroethane                                                          | 10-100            | 0-100             | 10-50             | 0-5                            | 40-60                    |
| Chloroprene                                                                 | -                 | 0-15              | -                 | -                              | -                        |
| Tetrachloroethylene                                                         | 0-15              | -                 | 5-25              | -                              | -                        |
| Chlorobenzene                                                               | 0-5               | -                 | -                 | -                              | -                        |
| Hexachlorobenzene                                                           | -                 | -                 | -                 | -                              | <2                       |
| <b>Other Organic Constituents Concentration Ranges (wt. %)</b>              |                   |                   |                   |                                |                          |
| 1,2-Dichloroethylene                                                        | -                 | 0-20              | -                 | -                              | -                        |
| 2-Chloroethanol                                                             | 0-2               | -                 | -                 | -                              | -                        |
| Ethylene                                                                    | -                 | 0-3               | -                 | -                              | -                        |
| Bis(2-chloroethyl)ether                                                     | 0-30              | -                 | 1-5               | -                              | -                        |
| Octachlorocyclopentane                                                      | -                 | -                 | -                 | -                              | <1                       |
| Heptachloropropane/Heptachlorobutene                                        | -                 | -                 | -                 | -                              | <1                       |
| Heavier Compounds <sup>a</sup>                                              | 30-60             | -                 | 25-50             | -                              | 30-60                    |
| Oil                                                                         | -                 | -                 | -                 | >95                            | -                        |
| <b>Maximum Inorganic HAP Concentrations (mg/kg)<sup>b</sup></b>             |                   |                   |                   |                                |                          |
| Arsenic                                                                     | 2                 | 2                 | 2                 | -                              | -                        |
| Cadmium                                                                     | 5                 | 5                 | 1                 | -                              | -                        |
| Chromium                                                                    | 11.3              | 1                 | 1                 | -                              | 10                       |
| Lead                                                                        | 20                | 5                 | 5.3               | -                              | -                        |
| Mercury                                                                     | 0.2               | 0.1               | 0.1               | -                              | -                        |
| Selenium                                                                    | 5                 | 5                 | 1                 | -                              | -                        |
| Hydrochloric Acid                                                           | -                 | -                 | -                 | -                              | <5                       |
| Chlorine                                                                    | 65-90             | 65-90             | 65-90             | <1                             | 65-75                    |



**Table 2-1 Stream Characteristics (continued)**

| <b>Component</b>                                          | <b>VCM<br/>HE</b> | <b>VCM<br/>LE</b> | <b>EDC<br/>HE</b> | <b>Hazardous<br/>Waste Oil</b> | <b>Mother<br/>Liquor</b> |
|-----------------------------------------------------------|-------------------|-------------------|-------------------|--------------------------------|--------------------------|
| <b>Other Inorganic Constituent Concentrations (µg/kg)</b> |                   |                   |                   |                                |                          |
| Zinc                                                      | -                 | -                 | -                 | <10                            | -                        |
| Iron                                                      | -                 | -                 | -                 | -                              | <50,000                  |
| <b>Other Waste Stream Characteristics</b>                 |                   |                   |                   |                                |                          |
| Ash Content (ppm)                                         | 0-1,720           | 0-750             | 0-750             | 4,000-<br>30,000               | 10,000-<br>100,000       |
| Higher Heating Value (Btu/lb)                             | 5,000-<br>6,200   | 5,000-<br>6,500   | 5,000-<br>6,200   | 10,000-<br>20,000              | 5,000-<br>6,000          |
| Average Production Rate (lb/hr)                           | 6,400             | 1,000             | 140               | <sup>c</sup>                   | <sup>c</sup>             |
| Density (lb/gal)                                          | 10-12             | 10-11             | 10-11             | 7.2-7.6                        | 11-12                    |

<sup>a</sup> – Primarily chlorinated butanes and butenes

<sup>b</sup> – Except chlorine, which is presented as a range of weight percents

<sup>c</sup> – Intermittently generated

**Table 3-1 HAF Equipment <sup>1</sup>**

|                                                                                                                                                           |                                                                                                                        |                                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| <u>Firebox</u><br>(F-550, F-570) <sup>2</sup><br>30' L x 9'5" H x 8'5" W<br>2,379 ft <sup>3</sup> volume<br>79 ft <sup>2</sup> cross section<br>Firebrick | <u>Caustic Scrubber</u><br>(C-553, C-573) <sup>2</sup><br>6' D x 33'6" H<br>Fiberglass-reinforced plastic (FRP)        | <u>WESP Water Drain Tank</u><br>(D-550, D-570) <sup>2</sup><br>7' D x 8' H<br>2,300 gallons<br>FRP       |
| <u>Flue Gas Cooler</u><br>(E-550, E-570) <sup>2</sup><br>8,230 ft <sup>3</sup><br>29.3 MM Btu/hr<br>406°F/250 psig<br>Carbon steel (CS)                   | <u>Knock-Out Drum</u><br>(C-554, C-574) <sup>2</sup><br>6'10" ID x 10' H<br>FRP                                        | <u>Super Heater</u><br>(E-553, E-573) <sup>2</sup><br>CS/Hastelloy C                                     |
| <u>Waste Heat Boiler Steam Drum</u><br>(C-550, C-570) <sup>2</sup><br>3'6" D x 20' L<br>28,300 lb/hr steam<br>300 psig<br>Carbon steel                    | <u>Vent Draft Blower</u><br>(K-551, K-571) <sup>2</sup><br>17,600 acfm<br>150 HP/1,800 RPM<br>Hastelloy rotor/FRP case | <u>Cross Exchanger</u><br>(E-554, E-574) <sup>2</sup><br>CS/CS                                           |
| <u>Spray Quench</u><br>2 nozzles in-line                                                                                                                  | <u>Vent Stack</u><br>(A-551, A-571) <sup>2</sup><br>3'6" D (at exit) x 125' H<br>Carbon Steel                          | <u>Catalytic Oxidizer Pre-Heater</u><br>(F-551, F-571) <sup>2</sup><br>5.6 MM Btu/hr<br>CS/310 SS        |
| <u>Acid Absorber</u><br>(C-551, C-571) <sup>2</sup><br>7' ID x 48" H total<br>2 packed beds<br>each bed 12' H<br>462 ft <sup>3</sup> /bed                 | <u>WESP Wash Water Tank</u><br>(D-561) <sup>3</sup><br>9' D x 10' H<br>4,700 gallons<br>FRP                            | <u>Catalytic Oxidizer</u><br>(V-550, V-570) <sup>2</sup><br>Carbon Steel                                 |
| <u>Dehumidifier Column</u><br>(C-552, C-572) <sup>2</sup><br>6' D x 33'6" H<br>FRP/polyvinyl chloride (PVC) liner                                         | <u>WESP</u><br>(Y-550, Y-570) <sup>2</sup><br>13' D x 41' H<br>4 x 62 kV Transformer/Rectifiers<br>FRP/Hastelloy C     | <u>Catalytic Oxidizer ID Fan</u><br>(K-554, K-574) <sup>2</sup><br>32,000 acfm<br>450 HP<br>Carbon Steel |

<sup>1</sup>Based on design conditions

<sup>2</sup>The first number designates the unit within the CCIN-1 HAF system and the second number designates the unit within the CCIN-2 HAF system

<sup>3</sup>Common to both CCIN-1 and CCIN-2

**Table 3-2      Stack Gas Monitoring Equipment**

| <b>Parameter</b> | <b>Range</b>                             |
|------------------|------------------------------------------|
| Oxygen           | 0-25% v                                  |
| Carbon Monoxide  | dual range<br>0-200 ppmv<br>0-3,000 ppmv |

## **Appendix A**

### **Equipment Drawings**

Dwg. 9D-00A-900, Rev. 1 – Overall Master Plan

Dwg. 5D-00-A-500, Rev. 14 – Plot Plan – Incinerator Unit – CCIN-1 and CCIN-2

Dwg. 5D-B-010, Rev. 5 – Process Flow Sheet – MACT Project - CCIN-1/CCIN-2

Dwg. 5D-A-021, Rev. 52 – CCIN-1 – Firing Controls

Dwg. 5D-A-022, Rev. 20 – CCIN-1 - Waste Heat Boiler and Steam Drum

Dwg. 5D-A-023, Rev. 32 – CCIN-1 - HCl Absorber and Acid Cooler

Dwg. 5D-A-024, Rev. 22 – CCIN-1 – D/H Column and Caustic Scrubber

Dwg. 5D-A-025, Rev. 22 – CCIN-1 – Knock-Out Drum, Fan, and Stack

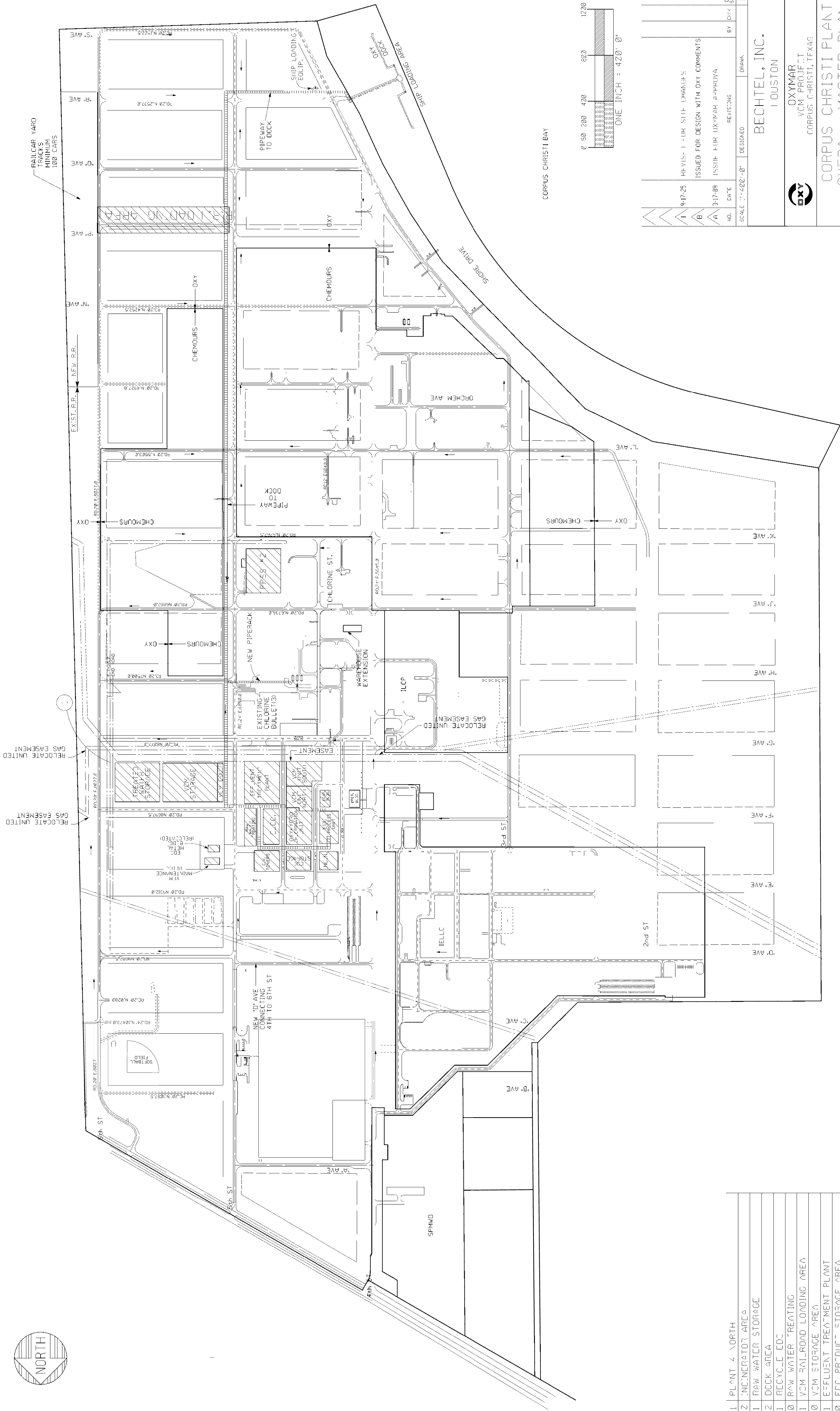
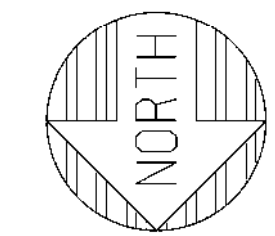
Dwg. 5D-A-046, Rev. 2 – CCIN-1/CCIN-2 – WESP Wash Water Tank

Dwg. 5D-A-047, Rev. 9 – CCIN-1 – WESP

Dwg. 5D-A-048, Rev. 8 – CCIN-1 – Superheater and Catalytic Oxidizer

Dwg. 5D-A-049, Rev. 7 – CCIN-1 – Cat Ox Preheater

Dwg. 5D-A-050, Rev. 11 – CCIN-1 – Cat Ox ID Fan and Stack



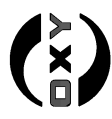
|            |                                     |
|------------|-------------------------------------|
| 4D-00A-401 | PLANT & NORTH                       |
| 50-00A-502 | INCINERATOR AREA                    |
| 60-00A-601 | RAW WATER STORAGE                   |
| 8C-02A-802 | DCK AREA                            |
| 7C-0CA-701 | RECYCLE EDC                         |
| 7C-02A-620 | RAW WATER TREATING                  |
| 8C-02A-801 | VCM RAILROAD LOADING AREA           |
| 8C-02A-800 | VCM STORAGE AREA                    |
| 5C-02A-501 | EFLUENT TREATMENT PLANT             |
| 7C-02A-700 | EDC PRODUCE STORAGE AREA            |
| 2D-20A-200 | EDC PROCESS UNIT                    |
| 4C-02A-400 | PANTRY 4 SOUTH                      |
| 3D-20A-302 | PANTRY 3 OVERHEAD                   |
| 9C-22A-921 | PROCESS AREA 4W, SW, SE, F, HALLWAY |

## REFERENCE DRAWINGS

| HQ. I# | REASON   | RT SP. | SCHEDULE RELEASE | ACTUAL RELEASE |
|--------|----------|--------|------------------|----------------|
| 1      | REFILING | RSK    |                  |                |
|        |          |        |                  |                |
|        |          |        |                  |                |
|        |          |        |                  |                |

| NO. | DATE    | DESIGNED | REVISIONS                                                                 | BY | CHECK | DESIGNED | PROJECT ENGINEER |
|-----|---------|----------|---------------------------------------------------------------------------|----|-------|----------|------------------|
| A   | 9-17-25 |          | REVISION - 1 - OUR SITE CHANGE(S):<br>ISSUED FOR DESIGN WITH OXY COMMENTS |    |       |          |                  |
| B   |         |          |                                                                           |    |       |          |                  |
| A   | 3-17-89 |          | ISSUED FOR OXYGEN APPROVAL                                                |    |       |          |                  |

BECHTEL, INC.  
HOUSTON



OXYMAR  
VCM PROJECT  
CORPUS CHRISTI, TEXAS

CORPUS CHRISTI PLANT  
OVERALL MASTER PLAN

|                                                                                    |         |             |      |
|------------------------------------------------------------------------------------|---------|-------------|------|
|  | JOB NO. | LEASING NO. | REV. |
|                                                                                    | 1961    | 90-004-900  | 1    |



## **Appendix B**

### **Alarm Operability**

## **Introduction**

40 CFR 63.1206(c)(3)(vii) requires the automatic waste feed cut-off (AWFCO) system and associated alarms to be tested at least weekly to verify operability, unless it is documented in the facility operating record that weekly testing unduly restrict or upset operations and that less frequent testing is adequate. However, at a minimum, the AWFCO system and associated alarms must be tested at least monthly. The AWFCO system for the HAF resides in the distributed control system (DCS). The DCS performs the test for all the alarm circuits almost continuously.

## **DCS Architecture**

The DCS is a digital process control and data acquisition system that consists of standard modular building blocks. The individual blocks are linked together by redundant cable, which comprises universal control networks (UCNs). Each module functionally stands alone to perform its pre-programed tasks. Together the modules provide distributed control and centralized monitoring capabilities so that the operators can recognize and react to situations at all process points in a quick and responsive manner. Built-in automatic diagnostics procedures alert the operator to potential equipment problems, and in many cases, automatically take corrective action to avert the problem.

Two types of modules operate at the process level and are called: 1) high performance process manager (HPM); and 2) Triconics PLC. These devices interface directly with the process measurement devices (e.g., level, flow, pressure, temperature transmitters, etc.). The control functions reside in the HPM (e.g., PID control, valve outputs, etc.). The AWFCO system resides in the Triconics PLC (e.g., waste feed cutoff valves, firebox burner management, etc.). To assure continuous process control, all HPM devices are redundant.

The Triconics is triple redundant to provide fault tolerant operation. Each device monitors the on-line computer and I/O cards continuously for malfunctions. If a malfunction is detected, the operator is notified across the UCN that a problem exists and automatically switches control to the redundant device. Complete control is always maintained.

Both the HPM and Triconics continuously monitor input functions for reasonable values (e.g., module failure, NO converter failure, and PV Range check) and the output functions by a readback check (checks the D/A converter). If a failure is detected, either the HPM or the Triconics will send an alarm to the operator immediately and under certain circumstances it



will automatically switch to the redundant partner. The Triconics also uses three-way voting of the I/O and the processors to provide complete fault tolerant operation. By design, if an output circuit to a control device loses continuity, the control device fails to the fail-safe position. For the liquid feed shutoff valves, this is in the closed position. There are also two valves in series that close to assure positive shutoff.

The HPM communicates with the operator via the UCN. The Triconics communicates through a redundant safety manager onto the same UCN. The UCN consists of two cables connecting all the process devices (HPMs and safety managers) to a network interface module (NIM). All devices on the "highway" continuously check the highway for faults. If a fault is found, the device issues an alarm to the operator and other devices on the highway. All the devices then switch to the redundant cable. To assure that the backup cable does not become damaged while not in use, the data highway automatically switches cables every 5 minutes.

The NIM interfaces the UCN to the local control network (LCN). The LCN is another dual cable data highway that interconnects different devices that are shared between several process networks (e.g., UCNs). For example, operators interface with the process on a universal station. The universal station resides on the LCN. The NIM is a redundant computer module that translates data transmission protocol on the UCN to/from the data transmission protocol on the LCN. The NIM also acts as a "data traffic cop" so that there is orderly data transmission.

Similar to the HPMs, if the active NIM malfunctions, the redundant NIM automatically takes full control of all the other NIM functions and an alarm is sent to the operator.

The LCN is continuously checked for malfunctions by all devices that reside on the LCN. If a device detects a fault on the current cable, it sends out an alarm to the operator and the other devices on the LCN. All devices then switch to the redundant cable. To assure that the backup cable does not become damaged while not in use, the LCN switches cables every 1 minute.

The operator views the process data on a universal station. All alarms are also received at this station. The VCM control room has multiple universal stations to provide sufficient access to the process and redundancy for the stations. Multiple stations are dedicated to the control of the area with the HAFs.

## **Alarm Checking**

Alarm checking is a task for the Triconics for shutdowns and the HPM for process alarms. When an alarm point is reached, the Triconics will first initiate any interlock actions that may be required. Then the Triconics will send the shutdown alarm signal along the UCN to the NIM. Any process alarms are sent from the HPM to the NIM. The NIM then assigns an alarm priority and sends out the alarm on the LCN to any and all devices that need the information. The universal station will receive the alarm signal and notify the operator by sounding an audible alarm and a LED indication light for the unit with the alarm. Alarm management at this point is very similar to the analog alarm annunciator boards. The operator can silence the alarm and then acknowledge the alarm.

## **AWFCO System Weekly Test Plan**

The alarm circuit path described above is continuously checked through extensive diagnostic programs on several computer devices. If a failure is found, as stated above, an alarm is sent to the operator immediately and, where appropriate, the system takes action to avert a problem that may be caused by the malfunction. On a weekly basis, this system is monitored at the universal station. The system status menu provides the status of each device on the UCN and LCN.

## **References**

- 1 Honeywell, Reference: System Summary -1 Volume TPS 3010-1, System Overview, Publication SW70-500, 1995.
- 2 Honeywell, Reference: System Summary -2 Volume TPS 3010-2, High Performance Process Manager Specification and Technical Data, Publication HP03-500, 1999.
- 3 Honeywell, Reference: System Summary -2 Volume TPS3010-2, TPS Process manager 110 Specification and Technical Data, Publication 1003-500, 1997.
- 4 Triconics, Reference: Tricon Planning & Installation Guide, 1998.

## **Attachment V.I.2**

### **CCIN-2 Halogen Acid Furnace**

**Attachment V.I.2**

**Boiler and Industrial Furnace Report**

**Halogen Acid Furnace CCIN-2**

**OxyChem**  
**Ingleside, Texas**



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## 1.0 Overview

OxyChem operates two Halogen Acid Furnaces (HAFs) (CCIN-1 and CCIN-2) at their Ingleside, Texas facility. The units treat organic wastes from the vinyl chloride monomer (VCM) and ethylene dichloride (EDC) processes. CCIN-1 and CCIN-2 were originally permitted under the Boiler and Industrial Furnace (BIF) standards in 40 CFR Part 266 Subpart H. The units then became subject to the Hazardous Waste Combustor (HWC) Maximum Achievable Control Technology (MACT) standards as HAFs pursuant to the regulations specified in 40 CFR Part 63 Subpart EEE. CCIN-1 and CCIN-2 subsequently demonstrated compliance with the HWC MACT standards during a comprehensive performance test. Pursuant to 30 TAC 305.571(b), existing HAFs that have demonstrated compliance with the HWC MACT standards are not subject to the permitting and trial burn requirements of 30 TAC 305 Subchapter Q unless otherwise required by the Agency.

This BIF report has been developed as a part of OxyChem's RCRA Part B permit application for HAF CCIN-2 if permitting is required by the Agency. This report is designed to demonstrate compliance with the applicable HWC MACT performance standards of 40 CFR Part 63, Subpart EEE. These performance standards include:

- 99.99% destruction and removal efficiency (DRE) of principal organic hazardous constituents (POHC);
- Control of hydrogen chloride (HCl) and chlorine gas emissions combined to 150 ppmv, expressed as chloride (Cl<sup>-</sup>) equivalent, dry basis (corrected to 7% oxygen);
- Control of particulate matter (PM) emissions based on complying with the HCl and chlorine gas standard;
- Control of mercury emissions based on complying with the HCl and chlorine gas standard;
- Control of combined semivolatile metal (Cd and Pb) emissions based on complying with the HCl and chlorine gas standard;
- Control of combined low-volatility metals (As, Be, and Cr) emissions based on complying with the HCl and chlorine gas standard;
- Control of carbon monoxide emissions to 100 ppmv or less on an hourly rolling average (HRA) dry basis (corrected to 7% oxygen);
- Control of total hydrocarbons emissions to 10 ppmv or less on an HRA dry basis (corrected to 7% oxygen); and
- Control of dioxin/furan emissions based on complying with either the carbon monoxide or hydrocarbon emission standard.

OxyChem prepared a comprehensive performance test (CPT) plan under the Hazardous Waste



Combustor MACT for the initial CPT test. That plan was reviewed by EPA, implemented, and results reported to EPA to demonstrate compliance. Via letter dated July 1, 2014, EPA accepted the notice of compliance and CPT report and concluded that it demonstrated compliance with 40 CFR Part 63, Subpart EEE. All limits were incorporated into OxyChem's air permit authorizing emissions from the HAF. Accordingly, no additional trial burn/CPT information is presented in this application.

## **1.1 Organization of Report**

This report is organized as follows:

- Section 1 - Overview (Overview of performance standards and waste treatment process);
- Section 2 - Wastes to be Treated;
- Section 3 - Description; and
- Section 4 - References.

## **1.2 Waste Treatment System Process and Feed Descriptions**

The facility site plan showing the location of the unit is illustrated on Drawing 9D-00A-900 in Appendix A.

HAF CCIN-2 consists of three primary process areas:

1. Furnace;
2. HCl Absorber; and
3. Air Pollution Control System (APCS).

The furnace consists of a firebox followed by a flue gas cooler/waste heat boiler, which is designed to destroy greater than 99.99% of hazardous organic constituents in the feed streams and to produce plant steam. The HCl recovery unit produces acid which can be used on-site for pH control in the VCM process and wastewater treatment systems. The APCS originally consisted of a two-column scrubber system followed by a knock-out drum.

Modifications were made to the APCS to incorporate two additional components: a wet electrostatic precipitator (WESP) and a catalytic oxidizer. These enabled OxyChem to meet the HWC MACT performance standards.

The basic flow of materials through the combustion system is illustrated on Drawing 5D-B-010 in Appendix A. Descriptions of the discrete components follow in this section, and Section

3 provides a more detailed description of OxyChem's combustion system.

### **1.2.1 Waste Storage**

All of the liquid hazardous wastes and vent streams treated in the HAF are generated on-site or off-site at other OxyChem facilities. Prior to being pumped to the HAF for treatment, these process wastes are stored in RCRA-permitted tanks (C-720A and C-7208). Hazardous waste oil and "mother liquor" may occasionally be blended into either tank prior to combustion.

In addition, vents from these two RCRA tanks, vents from other tanks in the EDC and VCM storage areas, as well as vents in the EDC, VCM, and Plant 2 process areas are also routed to the HAF for treatment.

Since wastes from the EDC and VCM production processes are of consistent composition, there is not a need to test each tank prior to treatment in the HAF. Periodic sampling and analysis of waste feed streams takes place as described in the facility Waste Analysis Plan.

Based on process and storage needs, wastes are pumped from each tank independently to the HAF.

### **1.2.2 Combustion System**

The CCIN-1 and CCIN-2 HAFs are identical and were designed and fabricated by Bigelow-Liptak Corporation. The units operate in a horizontal flow configuration and have demonstrated 99.99% DRE of organic constituents. The size, burner capacity, and thermal capacity of the unit is provided in Section 3.0. Drawing 5D-00-A-500 in Appendix A provides a plot plan for the CCIN-1 and CCIN-2 HAFs.

Organic wastes, vent gases, and natural gas are fed as fuel along with combustion air and atomizing steam into the feed end of the firebox. Originally, the HAF utilized a single induced draft (ID) fan to provide motive force to transport the combustion gas through the combustor. As part of the modifications made for HWC MACT, an additional ID fan was added following the APCS to assist in this function.

Combustion gases in excess of 1700 °F enter the waste heat boiler from the HAF, which generates process steam for on-site use.

### **1.2.3 HCl Absorber**

The furnace is followed by an absorber system which removes HCl from the combustion gases.

### **1.2.4 Air Pollution Control System (APCS)**

Combustion gases from the furnace, waste heat boiler, and HCl absorber are treated to remove particulate matter, trace metals, chlorine, and dioxins prior to being emitted to the atmosphere. The APCS originally had the following major components:

- Dehumidifier and caustic scrubber; and
- Knock-out drum.

After modifications were made for HWC MACT compliance, the APCS now also includes downstream of the knock-out drum the following components:

- WESP; and
- Catalytic oxidizer.

Combustion gas is vented to the atmosphere through a 125-ft stack, which was also installed as part of the APCS modifications.

More complete information on the APCS is provided in Section 3.9.

### **1.2.5 Blowdown Treatment**

The APCS blowdown is routed to the plant waste water treatment system. The blowdown normally contains total dissolved solids (TDS) and total suspended solids (TSS).

## 2.0 Wastes Treated

In the EDC and VCM processes OxyChem generates five separate hazardous organic waste streams that may be treated through combustion in the HAF, which are as follows:

- VCM plant light ends;
- VCM plant heavy ends;
- EDC plant heavy ends;
- Mother liquor; and
- Hazardous waste oil.

Table 2-1 lists the characteristics of these waste streams.

OxyChem does not produce or handle any products containing polychlorinated biphenyls (PCB) that could be regulated under the Toxic Substance Control Act (TSCA). OxyChem does not generate any waste materials that are designated as F020, F021, F022, F023, F026, or F027 wastes (dioxin waste codes). Non-pumpable waste streams are not fed to the furnace.

The wastes that are burned in the furnace are generated continuously in the VCM and EDC processes. The composition of the organic wastes does not vary significantly over time. In addition, the characteristics of the organic wastes generated in the VCM and EDC processes have similarities.

Refer to the Waste Analysis Plan for additional information on the wastes. OxyChem has explored and continues to look for additional ways to recover and reuse as much of its wastes as is practicable. Prior to being sent to tanks C-720A and C-720B, reaction byproducts undergo numerous recovery and separation stages at the individual processes to recover product, raw materials, and solvents.

### **3.0 Unit Description**

The following sections provide a detailed description of the HAF system. A complete set of process flow diagrams (PFDs) and equipment arrangements are provided as Appendix A. The design parameters for major components of the combustor are summarized in Table 3-1. The combustor equipment drawings (Appendix A) and specifications were prepared by OxyChem engineering.

#### **3.1 Description of HAF**

The combustion system consists of the firebox (combustion zone) and the waste heat boiler. The furnace and waste heat boiler are oriented to each other as shown in Drawing 5D-00-A-500 in Appendix A.

##### **3.1.1 Combustion Zone**

Combustion of organics takes place in the firebox. The firebox was fabricated by Bigelow-Liptak Corporation with the dimensions presented in Table 3-1. The design has no model number.

The firebox is made of carbon steel and designed for 34 million Btu/hr heat release.

The firebox has field-installed refractory consisting of 7 to 9 inches of firebrick. The unit is designed for a maximum operating temperature of 2,400 °F. The temperature is automatically controlled by reducing excess combustion air and/or the addition of natural gas to maintain a temperature greater than 1,700 °F.

The temperature is measured with a thermocouple at the exit of the combustion chamber. Interlocks are installed to initiate an emergency shutdown of the furnace should temperatures in excess of 2400 °F be experienced. Conversely, waste liquid feed is automatically cut-off if the temperature falls below the permitted minimum. Firing controls for CCIN-2 are shown in Appendix A.

##### **3.1.2 Waste Heat Boiler**

Hot combustion gases at approximately 1,700 - 2,400 °F pass from the firebox through a 6-foot 9-inch inner-diameter, refractory-lined duct to the flue gas cooler. The flue gas cooler is a fire-tube, waste-heat boiler that is made of carbon steel with refractory on the inlet channel and upstream tube sheet. The unit has a design heat duty of 29.3 million Btu/hr and generates 28,300

lb/hr of 250 psig steam. Combustion gases exit the cooler at approximately 400°F.

The waste heat boiler and steam drum are shown in Appendix A.

### **3.2 Nozzle and Burner Design**

Liquid organic waste is fed into the firebox through a single-burner assembly consisting of four waste-liquid injection guns, seven vent-gas nozzles, a spark-ignited pilot, and a single natural gas burner for auxiliary fuel.

Normally, only one or two waste liquid injection nozzles are used at a time for the furnace. The liquid feed flow rate is monitored and automatically controlled. Waste atomization is achieved by the addition of steam to each of the injection nozzles.

Downstream of the vent flow meter, the vent header enters an 8-inch diameter, Teflon-lined, bustle ring. Vent gases pass from the bustle ring into the firebox burner assembly through seven, 2.5-inch diameter vent nozzles located around the outer circumference of the burner assembly.

The pilot, which is always on during normal operation, is a Maxon premix type with a spark igniter.

Combustion air is supplied directly into the burner unit through a 2-foot square inlet, which is mounted vertically behind the burner.

### **3.3 Description of the Auxiliary Fuel Systems**

Drawings in Appendix A show the fuel train for the combustion system. Natural gas is the only support fuel used for the furnace. Up to 20 MMBtu/hr of natural gas can be fired through a single burner. The flow of natural gas is varied to control the firebox temperature.

### **3.4 Capacity of Prime Mover**

Combustion air is drawn into the combustion chamber by the action of an induced-draft fan, located downstream of the caustic scrubber. With the added HWC MACT equipment, air flow is also maintained by a second induced-draft fan located downstream of the catalytic oxidizer. The materials of construction for these fans are listed in Table 3-1.

Air is introduced to the burner through a screened vent, and air flow is controlled by the

temperature control damper, which is upstream of the acid absorber.

Under normal operation, air flow is adjusted to maintain temperature, and natural gas is adjusted to maintain minimum temperature. However, if there are still insufficient heat releases, air flow may be reduced, as needed, to maintain firebox temperature. When firing little or no liquid waste, natural gas flow may be maximized. A mechanical stop on the damper prevents it from reducing air flow below a level that would maintain combustion at about 40% of the design rate. This minimum air flow rate corresponds to the maximum fuel gas rate.

A small amount of air is introduced into the pilot line by a Maxon premix blower. The blower is made of carbon steel and has an associated motor.

### **3.5 Description of Waste Feed Systems**

There are three primary liquid hazardous waste streams that are destroyed in the HAF: VCM plant heavy ends (VCM HE), VCM plant light ends (VCM LE), and EDC plant heavy ends (EDC HE). The VCM HE and VCM LE are generated as a result of VCM production. EDC HE is generated at the EDC plant. Also, hazardous waste oil and mother liquor are occasionally generated. These two streams are blended with the other waste streams prior to combustion.

The heavy ends normally are combusted separately from the light ends. However, it is possible that they may occasionally be combined into one stream.

#### **3.5.1 Liquid Wastes Delivery**

The flow of liquid feeds to the furnace is continuously monitored and recorded. The feed line is equipped with a mass flow meter and an automatic waste feed cut-off valve. The waste liquid feed flowrate is set manually, but the temperature controller can automatically override the liquid waste feed controller and reduce the liquid waste feed to maintain the firebox temperature below a temperature necessary for equipment safety.

Downstream of the flow monitor, the liquid waste feed line is connected to a header. The furnace includes four liquid waste burners that receive feed from this header. Each burner is atomized with steam. Typically, only one or two burners are in operation at a time. A description of the burner nozzles is presented in Section 3.2.



### **VCM Plant Heavy Ends**

The VCM HE is pumped from a 65,000 gallon RCRA permitted storage tank to the burner unit. The VCM HE delivery pump is a centrifugal pump. Average production rate of the VCM HE is 6,400 lb/hour.

### **VCM Plant Light Ends**

The VCM LE is pumped at ambient temperature from a 65,000 gallon RCRA permitted storage tank. The delivery pump is a centrifugal pump. Average production rate of the VCM LE is about 1,000 lb/hr.

### **EDC Plant Heavy Ends**

The EDC HE, which is generated at a rate of approximately 140 lb/hr, is transferred to one of the 65,000 gallon RCRA permitted tanks to the HAF.

### **Waste Oil**

Waste oil is periodically generated at different areas within the plant and is normally disposed of off-site. However, it may be collected and blended into one of the RCRA-permitted tanks.

### **Mother Liquor**

Mother liquor is periodically generated at different areas within the plant, and is normally disposed of off-site. However, it may be collected and blended into one of the RCRA-permitted tanks.

## **3.5.2 Vent Gases**

Process vent gases are collected in a 10-inch Teflon-lined header. Entrained liquid is removed in a knock-pot before the header splits to the furnace. The split between the two HAFs (CCIN-1 and CCIN-2) is adjusted by a manual loading valve in the feed line. Vent flow is metered and monitored in the control room. Average vent flow is typically about 500 SCFM to the unit. Nitrogen is automatically added to maintain a minimum vent flow of 300 SCFM to prevent a flashback in the vent line.

## **3.6 Fugitives Control**

The HAF operates under an induced draft from the fans, which maintains a negative pressure. The feed of liquid waste is automatically cut-off if the pressure in the firebox is greater than or equal to atmospheric pressure.

### 3.7 Description of Automatic Waste Feed Cutoff System

The automatic waste feed cutoff (AWFCO) system interlocks to prevent feeding liquid hazardous waste if the HAF operating conditions are outside the RCRA permit limits. The AWFCO system resides in the distributed control system (DCS). During startup and shutdown of the HAF or during process upsets, the interlock system automatically stops hazardous liquid waste feed systems and prevents their restart until the HAF is at proper operating conditions, and the interlock is reset by the DCS operator. The process controller adjusts auxiliary fuel feed (natural gas) to the waste burners upon any AWFCO event in order to maintain the firebox temperatures.

Descriptions of process monitoring instruments that are interlocked with the AWFCO system under the RCRA permit and their instrument ranges are included in Section 3.12. OxyChem's RCRA Part B permit requires the AWFCO system and associated alarms that would initiate the cut-off to be tested at least weekly to verify operability. To clarify this it says, "All associated alarm test circuits shall be activated to demonstrate circuit continuity." The DCS performs the test for all the alarm circuits almost continuously.

Alarm checking is a task performed within the DCS. When an alarm point is reached, the programmable logic controller (PLC), which hosts the emergency shutdown system functions including waste feed cutoff valves, firebox burner management, etc., will first initiate any interlock actions that may be required. Then the PLC will send the "shutdown alarm" signal along the universal control networks (UCN) to the network interface module (NIM). Any process alarms are sent from the high performance process manager (HPM), which hosts functions such as PID control, valve outputs, etc., to the NIM. The NIM then assigns an alarm priority and sends out the alarm on the local control network (LCN) to any and all devices that need the information. The universal station (operator station) will receive the alarm signal and notify the operator by sounding an audible alarm and a LED indication light for the unit with the alarm.

Alarm management at this point is very similar to the analog alarm annunciator boards. The operator can silence the alarm and then acknowledge the alarm.

The alarm circuit path described above is continuously checked through extensive diagnostic programs on several computer devices. If a failure is found, as stated above, an alarm is sent to the operator immediately and, where appropriate, the system takes action to avert a problem that may be caused by the malfunction. On a weekly basis, this system is monitored at the universal station.

For greater detail of the DCS and circuit continuity checks, see Appendix B, which details procedures for testing alarm operability.

### 3.7.1 Emergency Shutdown Procedures

The emergency shutdown system consists of instrumentation that is designed to keep the HAF from operating at conditions that could endanger personnel, damage the equipment, or lead to unacceptable emissions to the atmosphere. Three types of actions may result from operating conditions deviating beyond pre-defined limits. These actions are: 1) total system shutdown; 2) total flame shutdown; and 3) waste liquid feed cutoff. The HAF operating conditions that lead to the three types of emergency actions are described below.

#### 3.7.1.1 Total Shutdown

A total shutdown automatically terminates all burning in the firebox. The waste liquid, vent gases, and natural gas are shut off to the firebox. In addition, the induced draft fan and pilot premix blower are both shutdown. The following conditions cause a total shutdown:

| <b>Total System Shutdown Parameter</b> | <b>Cut-Off Limit/Condition</b> |
|----------------------------------------|--------------------------------|
| Low steam drum level                   | 10%                            |
| High absorber bottom temperature       | 200 °F                         |
| High absorber liquid level             | 90%                            |

#### 3.7.1.2 Total Flame Shutdown

A total flame shutdown automatically terminates all burning in the firebox. The waste liquid, vent gases, and natural gas are shut off to the firebox. The induced draft fan and pilot premix blower continue running to purge the system of any corrosive and combustible material. The following conditions cause a total flame shutdown.

| <b>Total Flame Shutdown Parameter</b>  | <b>Cut-Off Limit/Condition</b> |
|----------------------------------------|--------------------------------|
| High natural gas pressure <sup>a</sup> | 25 psig                        |
| Low natural gas pressure <sup>a</sup>  | 5 psig                         |
| High pilot gas pressure                | 9" water                       |
| Low pilot gas pressure                 | 3" water                       |
| Low pilot mixer pressure drop          | 2" water                       |
| Low blower suction draft               | 10" water                      |

|                          |              |
|--------------------------|--------------|
| Low firebox draft        | -0.05" water |
| High firebox temperature | 2,400 °F     |
| Loss of flame detection  | Absence      |

a – In this case, vents and liquid waste are shut off, but the pilot gas continues to operate.

### 3.7.1.3 Waste Liquid Feed Cutoff

Hazardous waste liquid feed to the firebox is automatically shut off due to the conditions detailed below. The HAF continues to run on natural gas to combust vent gases. These limits and conditions reflect AWFCO requirements for the OxyChem hazardous waste HAF.

| <b>Automatic Waste Feed Cutoff Parameter</b> | <b>Cut-Off Limit/Condition</b>                             |
|----------------------------------------------|------------------------------------------------------------|
| Low Firebox Temperature                      | < 1,787 °F (Hourly Rolling Average)                        |
| Maximum Liquid Waste Feed Rate               | > 5,815 lb/hr (Hourly Rolling Average)                     |
| Maximum Chloride Feed Rate                   | > 3,574 lb/hr (12-Hourly Rolling Average)                  |
| Minimum Caustic Scrubber Liquid to Gas Flow  | < 12.44 gpm/kscfm (Hourly Rolling Average)                 |
| Minimum Caustic Scrubber Recycle pH          | < 8.91 (Hourly Rolling Average)                            |
| Maximum Stack Gas Flow                       | > 21.63 kacfms (Hourly Rolling Average)                    |
| Maximum Combustion Chamber Pressure          | > 0 in. wc (Instantaneous)                                 |
| Maximum Stack Gas CO Concentration           | ≥ 100 ppm dry @ 7% O <sub>2</sub> (Hourly Rolling Average) |
| Minimum Waste Atomization Steam Pressure     | < 64 psig (Instantaneous)                                  |
| Minimum Caustic Scrubber Recycle Pressure    | < 7.0 (Hourly Rolling Average)                             |

In addition, the waste feed cut-off system activates under any of the following conditions:

- Electrical power outage;
- Liquid injection system flame-out;
- Loss of flame in the combustion chamber;
- Loss of instrument air;
- Shutdown of main induced draft fan;
- Loss of waste atomizing fluid;
- Loss of combustion air;
- Failure of computer monitoring system; or
- Malfunction of pollution control system.

Final AWFCO parameter values for permitted operation under 40 CFR Part 63 Subpart EEE and additional State of Texas requirements are expected to be negotiated between the TCEQ and OxyChem based on the results of subsequent CPT tests.

### **3.8 Stack Gas Monitoring**

Continuous emissions monitoring systems (CEMS) are used to monitor stack gases continuously for carbon monoxide and oxygen concentrations. Continuous emissions monitor ranges are listed in Table 3-2.

The CO and O<sub>2</sub> CEMS meet all of the performance specifications detailed in 40 CFR Part 60, Appendix B, Performance Specification 4B and the data analysis and recording requirements in 40 CFR Sections 63.8(c)(4) and 63.8(g). Dedicated sample ports for the CEMS probes are located in the stack.

If any CEM system ceases to operate correctly, or if a zero and span procedure for an analyzer exceeds 20 minutes in duration, the liquid waste feed must be cut-off.

### **3.9 HCl Absorber**

The HCl absorber is designed primarily to recover HCl from the combustion gases for reuse in other processes at the plant. The HCl absorber is a packed column constructed of rubber-lined carbon steel covered with an acid-brick lining. The dimensions of the absorber are included in Table 3-1.

Gases from the waste-heat boiler are introduced into the absorption column through a 47-inch inner-diameter inlet that is lined with refractory. Water from the plant and occasionally blowdown from the dehumidifier are introduced at the top of the column, immediately cooling the combustion gases to about 150 °F in this section.

Water is pumped from the bottom of the column. The acid is normally recycled to the quench section and to the lower bed. Excess acid from the bottom of the column is cooled in a graphite cooler and used on-site for pH control in the VCM process and wastewater treatment system.

Excess acid is neutralized with limestone, caustic, or other alkaline streams in the plant's wastewater treatment system. A drawing showing the HCl absorber unit for CCIN-2 is provided in Appendix A.

### **3.10 Air Pollution Control System Equipment**

#### **3.10.1 Overview**

As described in Section 3.0, the APCS originally had the following major components:

- Dehumidifier and caustic scrubber; and
- Knock-out drum.

After modifications made for HWC MACT compliance, the APCS now includes the following components located downstream of the knock-out drum:

- WESP; and
- Catalytic oxidizer.

Combustion gas is vented to the atmosphere through a 125-ft stack.

#### **3.10.2 Dehumidifier and Caustic Scrubber**

Gases exiting the HCl recovery system enter the first of two spray scrubber columns (a dehumidifier column), which is followed by a caustic scrubber column. Dimensions and materials of construction for the unit are included in Table 3-1. A drawing showing the scrubber for CCIN-2 is provided in Appendix A.

Gases (at approximately 149°F) from the HCl recovery system are introduced at the top of the dehumidifier column. Gases are cooled to about 113 °F and are dehumidified by co-current direct contact with water that is recycled from the caustic scrubber. Sodium hydroxide is added to maintain the pH of the scrubbing water above 8 and absorb chlorine and HCl from the flue gases. Sodium thiosulfate or sodium bisulfite is injected into the scrubbing water to complete conversion of the Cl<sub>2</sub> to chloride. The average flow rate of water to the dehumidifier is 700 gpm. Dehumidifier bottoms are cooled to 100 °F and recycled to the caustic scrubber. A small amount of blowdown is removed from the scrubber to purge salts from the scrubbing water system. Softened water is added to the caustic scrubber on level control to make up for blowdown losses.

Gases from the dehumidifier pass through a 36-inch diameter FRP pipe to the caustic scrubber. Inside the scrubber, spray nozzles discharge water that consists primarily of cooled bottoms from the dehumidifier column. Similar to the dehumidifier column, sodium hydroxide is added to raise the pH of the scrubbing water above 8.

### **3.10.3 Knock-Out Drum**

The knock-out drum receives combustion gases from the caustic scrubber at approximately 100°F. Dimensions and materials of construction for the knock-out drum are included in Table 3-1. The knock-out drum serves to separate entrained moisture from the combustion gases. The collected water flows by gravity to the caustic scrubber bottoms stream, which is then pumped to the dehumidifier column. A drawing showing these components for CCIN-2 is provided in Appendix A.

### **3.10.4 Wet Electrostatic Precipitator**

The WESP is a device that was installed to remove sub-micron sized PM and metals from the gas stream. The design for the WESP is a down-flow, tubular-component vessel that uses saturated inlet gas as the irrigation medium. Dimensions and materials of construction for the WESP are included in Table 3-1. A drawing showing the flow diagram for the WESP associated with CCIN-2 is provided in Appendix A.

As gases enter the vertical collecting tubes, a high-intensity corona charges the water vapor, PM, and condensed metals. Charged particles and water vapor mist migrate to the collecting tube walls to form the irrigation film draining by gravity down the tube. The corona is produced by a discharge electrode which is centered in each collecting tube.

The WESP is designed for a 95% removal efficiency for particulate matter to meet or exceed the MACT requirements for emissions of semi-volatile metals and low volatile metals.

Periodically, the WESP requires flushing with an external source of water. A WESP wash water tank stores water required for the WESP on CCIN-2. Water from this tank is pumped to the WESP on a timed basis. Dimensions and materials of construction for the WESP wash water tank are included in Table 3-1.

A separate WESP water drain tank for the WESP is used to collect the flush water from the WESP. The WESP water drain tank is sized to contain two wash cycles assuming no pump out. This water is routed to the waste water treatment system (WWTS). Dimensions and materials of construction for the WESP water drain tank is included in Table 3-1.



### **3.10.5 Heat Exchangers, Preheaters, and Catalytic Oxidizer**

Saturated gas leaving the WESP passes through a steam-heated superheater to raise the temperature from 129 °F to 155 °F, which is above the dew point. Superheated gas then passes through the cold side of the cross exchanger. The cross exchanger is a gas-to-gas heat exchanger that partially preheats feed to the catalytic oxidizer by recovering heat from the stream leaving the catalytic oxidizer.

Gas leaving the cross exchanger is sent to the catalytic oxidizer pre-heater, which is a natural gas fired heater designed to raise the gas above the 420 °F (450 °F used for design) minimum inlet temperature required for the catalytic oxidizer. Approximately 40 scfm of natural gas is required.

The catalytic oxidizer is a vapor phase dioxin/furan (PCDD/F) destruction device based on established selective catalytic reduction (SCR) technology used for NO<sub>x</sub> control. Hot preheated gas is passed through a cubical vessel containing a grid of honeycomb catalyst layers. The catalytic oxidizer is designed to destroy in excess of 96% of the vapor phase PCDD/F based on an inlet of 10 ng/dscm TEQ at 7% O<sub>2</sub> reducing to an outlet concentration of no more than 0.3 ng/dscm TEQ. Treated gases leaving the catalytic oxidizer are sent to the hot side of the cross exchanger to partially preheat incoming feed.

Dimensions and materials of construction for the super heater, cross exchanger, preheater, and catalytic oxidizer, are included in Table 3-1. Drawings for the super heater, cross exchangers, preheater, and catalytic oxidizer are provided in Appendix A.

### **3.10.6 Vent Stack**

Historically, combustion gases from the knock-out drum were drawn into the induced-draft blower and discharged to the vent stack.

As a result of HWC MACT upgrades, treated gases exiting the cross exchanger hot side are sent to the suction of a new ID fan, which provides motive force to pull the gases through the new equipment. The ID fan discharges to a new 3.5 feet diameter stack that is 125 feet tall.

There are two sampling ports located on the new stack, which are located 90 degrees apart from each other and are accessible from a sampling platform. Stack gases are monitored for carbon monoxide and oxygen.

### **3.11 Construction Materials**

Construction materials for the HAF components are specified in Table 3-1

### **3.12 Location and Description of Temperature, Pressure, and Flow Indicating and Control Devices**

Locations of process control instruments are provided in the unit process flow diagrams (Appendix A). This section provides a general description of temperature, pressure, flow, and other instrumentation requirements necessary to ensure compliance with all permit conditions. A discussion of the major controls for the HAF that are linked to the DCS is also provided. There is a separate PLC for burner management that communicates with the DCS. Section 3.7.1.3 presents the parameters that are used to monitor plant operations and record data for the facility operating record and test burns. Instrument calibration is performed according to manufacturer's specifications.

The DCS controls the HAF operations. A description of the primary control loops follows. AWFCO functions for each control are discussed in Section 3.7.

#### **3.12.1 Waste Feed Rate Control**

A mass flow meter in combination with the DCS maintains a continuous record of the hazardous waste feed rate to the furnace. The feed rate of chlorine and ash during operations may be calculated by multiplying this feed rate by the parameter concentration measured following the Waste Analysis Plan.

The total and average heat input values for the feeds to the HAF are calculated in the DCS by a heat balance around the waste heat boiler.

#### **3.12.2 Combustion Chamber Gas Temperature and Burner Controls**

Firebox temperature is controlled by modulating air flow, natural gas flow rate, or the waste to the burners

Thermocouples record combustion temperature in the exit from the firebox. Temperature recorders and temperature indicators in the DCS continuously monitor the process.

Natural gas feed rate to the burner is measured with a vortex meter prior to the feed nozzle. Natural gas pressure (a permitted AWFCO) is measured with an electronic differential pressure transmitter switch.

Atomizing steam pressure, a permitted AWFCO, is measured using a differential pressure transmitter on the steam header to the nozzles.

### **3.12.3 HCl Absorber Packed Bed Inlet Gas Temperature**

Inlet temperature to the HCl absorber packed bed is measured with a thermocouple. Temperature indicators in the DCS continuously monitor the process. If a high temperature is detected, the alarm is activated.

### **3.12.4 Quench Chamber Water Flow Rate**

The flow rate of water to the quench chamber nozzles (a permitted AWFCO) is measured using magmeters or vortex meters on the quench inlet line to the feed nozzles.

### **3.12.5 Scrubber Recycle pH**

The pH of the caustic scrubber recycle liquor is monitored by means of a pH probe in the bottom effluent from the caustic scrubber. Caustic is added, as necessary, to maintain the desired pH.

### **3.12.6 WESP Transformer/Rectifier (T/R) kVA**

The T/R control displays primary and secondary voltage. The control panel sends voltage information to the DCS where the HRA secondary kVA interlock is initiated.

### **3.12.7 Stack Gas Oxygen and Carbon Monoxide Levels**

Stack gas emission levels are measured by means of parameter specific stack gas analyzers as described in Section 3.8.

### **3.13 Combustion Gas Flow Rate**

Combustion gas flow rate is measured with a flow monitor that is mounted on the new exhaust stack.

## **4.0 Closure**

A closure plan, which describes the procedures that will be implemented for closure of HAF CCIN-2, is provided in Attachment VII.A.5. Closure cost estimates are also provided as part of the closure plan.

## 5.0 References

U.S. Environmental Protection Agency (EPA). "Guidance Manual for Hazardous Waste Incinerator Permits." Office of Solid Waste, Washington, D.C. March 1983.

U.S. EPA. "Guidance on Setting Permit Conditions and Reporting Trial Burn Results." Hazardous Waste Incineration Guidance Series, Volume II. Office of Solid Waste. Washington D.C. EPN625/6-89/019. January 1989.

U.S. EPA. "BIF Technical Implementation Document." Washington, D.C. EPA-530-R-92-011. March 1992.

U.S. EPA. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods." Washington, D.C. SW-846. Update III. December 1996.

U.S. EPA. "Protocol for Human Health Risk Assessment at Hazardous Waste Combustion Facilities." EPA-R6-098-002. Center for Combustion Science and Engineering, Multimedia Planning and Permitting Division, U.S. EPA Region 6. Dallas, Texas. January 1998a.

U.S. EPA. "Protocol for Screening Level Ecological Risk Assessment at Hazardous Waste Combustion Facilities." EPA-R6-098-003. Center for Combustion Science and Engineering, Multimedia Planning and Permitting Division, U.S. EPA Region 6. Dallas, Texas. January 1998b.

## Tables



**Table 2-1 Stream Characteristics**

| <b>Component</b>                                                            | <b>VCM<br/>HE</b> | <b>VCM<br/>LE</b> | <b>EDC<br/>HE</b> | <b>Hazardous<br/>Waste Oil</b> | <b>Mother<br/>Liquor</b> |
|-----------------------------------------------------------------------------|-------------------|-------------------|-------------------|--------------------------------|--------------------------|
| <b>Organic Hazardous Air Pollutants (HAPs) Concentration Ranges (wt. %)</b> |                   |                   |                   |                                |                          |
| Vinyl Chloride Monomer                                                      | -                 | 0-5               | -                 | -                              | -                        |
| Carbon Tetrachloride                                                        | -                 | 0-15              | -                 | -                              | -                        |
| Chloroform                                                                  | 0-5               | 0-100             | -                 | -                              | -                        |
| Chloroethane                                                                | -                 | 0-10              | -                 | -                              | -                        |
| 1,1,2,2-Tetrachloroethane                                                   | 5-25              | -                 | -                 | -                              | <1                       |
| Trichloroethylene                                                           | 0-2               | 0-5               | -                 | -                              | <2                       |
| 1,1,1-Trichloroethane                                                       | 0-5               | -                 | -                 | 0-5                            | -                        |
| 1,1,2-Trichloroethane                                                       | 0-90              | -                 | 5-30              | -                              | <1                       |
| 1,1-Dichloroethane                                                          | -                 | 0-30              | -                 | -                              | -                        |
| 1,2-Dichloroethane                                                          | 10-100            | 0-100             | 10-50             | 0-5                            | 40-60                    |
| Chloroprene                                                                 | -                 | 0-15              | -                 | -                              | -                        |
| Tetrachloroethylene                                                         | 0-15              | -                 | 5-25              | -                              | -                        |
| Chlorobenzene                                                               | 0-5               | -                 | -                 | -                              | -                        |
| Hexachlorobenzene                                                           | -                 | -                 | -                 | -                              | <2                       |
| <b>Other Organic Constituents Concentration Ranges (wt. %)</b>              |                   |                   |                   |                                |                          |
| 1,2-Dichloroethylene                                                        | -                 | 0-20              | -                 | -                              | -                        |
| 2-Chloroethanol                                                             | 0-2               | -                 | -                 | -                              | -                        |
| Ethylene                                                                    | -                 | 0-3               | -                 | -                              | -                        |
| Bis(2-chloroethyl)ether                                                     | 0-30              | -                 | 1-5               | -                              | -                        |
| Octachlorocyclopentane                                                      | -                 | -                 | -                 | -                              | <1                       |
| Heptachloropropane/Heptachlorobutene                                        | -                 | -                 | -                 | -                              | <1                       |
| Heavier Compounds <sup>a</sup>                                              | 30-60             | -                 | 25-50             | -                              | 30-60                    |
| Oil                                                                         | -                 | -                 | -                 | >95                            | -                        |
| <b>Maximum Inorganic HAP Concentrations (mg/kg)<sup>b</sup></b>             |                   |                   |                   |                                |                          |
| Arsenic                                                                     | 2                 | 2                 | 2                 | -                              | -                        |
| Cadmium                                                                     | 5                 | 5                 | 1                 | -                              | -                        |
| Chromium                                                                    | 11.3              | 1                 | 1                 | -                              | 10                       |
| Lead                                                                        | 20                | 5                 | 5.3               | -                              | -                        |
| Mercury                                                                     | 0.2               | 0.1               | 0.1               | -                              | -                        |
| Selenium                                                                    | 5                 | 5                 | 1                 | -                              | -                        |
| Hydrochloric Acid                                                           | -                 | -                 | -                 | -                              | <5                       |
| Chlorine                                                                    | 65-90             | 65-90             | 65-90             | <1                             | 65-75                    |

**Table 2-1 Stream Characteristics (continued)**

| <b>Component</b>                                          | <b>VCM<br/>HE</b> | <b>VCM<br/>LE</b> | <b>EDC<br/>HE</b> | <b>Hazardous<br/>Waste Oil</b> | <b>Mother<br/>Liquor</b> |
|-----------------------------------------------------------|-------------------|-------------------|-------------------|--------------------------------|--------------------------|
| <b>Other Inorganic Constituent Concentrations (µg/kg)</b> |                   |                   |                   |                                |                          |
| Zinc                                                      | -                 | -                 | -                 | <10                            | -                        |
| Iron                                                      | -                 | -                 | -                 | -                              | <50,000                  |
| <b>Other Waste Stream Characteristics</b>                 |                   |                   |                   |                                |                          |
| Ash Content (ppm)                                         | 0-1,720           | 0-750             | 0-750             | 4,000-<br>30,000               | 10,000-<br>100,000       |
| Higher Heating Value (Btu/lb)                             | 5,000-<br>6,200   | 5,000-<br>6,500   | 5,000-<br>6,200   | 10,000-<br>20,000              | 5,000-<br>6,000          |
| Average Production Rate (lb/hr)                           | 6,400             | 1,000             | 140               | <sup>c</sup>                   | <sup>c</sup>             |
| Density (lb/gal)                                          | 10-12             | 10-11             | 10-11             | 7.2-7.6                        | 11-12                    |

<sup>a</sup> – Primarily chlorinated butanes and butenes

<sup>b</sup> – Except chlorine, which is presented as a range of weight percents

<sup>c</sup> – Intermittently generated

**Table 3-1 HAF Equipment <sup>1</sup>**

|                                                                                                                                                           |                                                                                                                        |                                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| <u>Firebox</u><br>(F-550, F-570) <sup>2</sup><br>30' L x 9'5" H x 8'5" W<br>2,379 ft <sup>3</sup> volume<br>79 ft <sup>2</sup> cross section<br>Firebrick | <u>Caustic Scrubber</u><br>(C-553, C-573) <sup>2</sup><br>6' D x 33'6" H<br>Fiberglass-reinforced plastic (FRP)        | <u>WESP Water Drain Tank</u><br>(D-550, D-570) <sup>2</sup><br>7' D x 8' H<br>2,300 gallons<br>FRP       |
| <u>Flue Gas Cooler</u><br>(E-550, E-570) <sup>2</sup><br>8,230 ft <sup>3</sup><br>29.3 MM Btu/hr<br>406°F/250 psig<br>Carbon steel (CS)                   | <u>Knock-Out Drum</u><br>(C-554, C-574) <sup>2</sup><br>6'10" ID x 10' H<br>FRP                                        | <u>Super Heater</u><br>(E-553, E-573) <sup>2</sup><br>CS/Hastelloy C                                     |
| <u>Waste Heat Boiler Steam Drum</u><br>(C-550, C-570) <sup>2</sup><br>3'6" D x 20' L<br>28,300 lb/hr steam<br>300 psig<br>Carbon steel                    | <u>Vent Draft Blower</u><br>(K-551, K-571) <sup>2</sup><br>17,600 acfm<br>150 HP/1,800 RPM<br>Hastelloy rotor/FRP case | <u>Cross Exchanger</u><br>(E-554, E-574) <sup>2</sup><br>CS/CS                                           |
| <u>Spray Quench</u><br>2 nozzles in-line                                                                                                                  | <u>Vent Stack</u><br>(A-551, A-571) <sup>2</sup><br>3'6" D (at exit) x 125' H<br>Carbon Steel                          | <u>Catalytic Oxidizer Pre-Heater</u><br>(F-551, F-571) <sup>2</sup><br>5.6 MM Btu/hr<br>CS/310 SS        |
| <u>Acid Absorber</u><br>(C-551, C-571) <sup>2</sup><br>7' ID x 48" H total<br>2 packed beds<br>each bed 12' H<br>462 ft <sup>3</sup> /bed                 | <u>WESP Wash Water Tank</u><br>(D-561) <sup>3</sup><br>9' D x 10' H<br>4,700 gallons<br>FRP                            | <u>Catalytic Oxidizer</u><br>(V-550, V-570) <sup>2</sup><br>Carbon Steel                                 |
| <u>Dehumidifier Column</u><br>(C-552, C-572) <sup>2</sup><br>6' D x 33'6" H<br>FRP/polyvinyl chloride (PVC) liner                                         | <u>WESP</u><br>(Y-550, Y-570) <sup>2</sup><br>13' D x 41' H<br>4 x 62 kV Transformer/Rectifiers<br>FRP/Hastelloy C     | <u>Catalytic Oxidizer ID Fan</u><br>(K-554, K-574) <sup>2</sup><br>32,000 acfm<br>450 HP<br>Carbon Steel |

<sup>1</sup>Based on design conditions

<sup>2</sup>The first number designates the unit within the CCIN-1 HAF system and the second number designates the unit within the CCIN-2 HAF system

<sup>3</sup>Common to both CCIN-1 and CCIN-2

**Table 3-2      Stack Gas Monitoring Equipment**

| <b>Parameter</b> | <b>Range</b>                             |
|------------------|------------------------------------------|
| Oxygen           | 0-25% v                                  |
| Carbon Monoxide  | dual range<br>0-200 ppmv<br>0-3,000 ppmv |

## **Appendix A**

### **Equipment Drawings**

Dwg. 9D-00A-900, Rev. 1 – Overall Master Plan

Dwg. 5D-00-A-500, Rev. 14 – Plot Plan – Incinerator Unit – CCIN-1 and CCIN-2

Dwg. 5D-B-010, Rev. 5 – Process Flow Sheet – MACT Project - CCIN-1/CCIN-2

Dwg. 5D-A-026, Rev. 46 – CCIN-2 – Firing Controls

Dwg. 5D-A-027, Rev. 19 – CCIN-2 - Waste Heat Boiler and Steam Drum

Dwg. 5D-A-028, Rev. 27 – CCIN-2 - HCl Absorber and Acid Cooler

Dwg. 5D-A-029, Rev. 20 – CCIN-2 – D/H Column and Caustic Scrubber

Dwg. 5D-A-030, Rev. 21 – CCIN-2 – Knock-Out Drum, Fan, and Stack

Dwg. 5D-A-046, Rev. 2 – CCIN-1/CCIN-2 - WESP Wash Water Tank

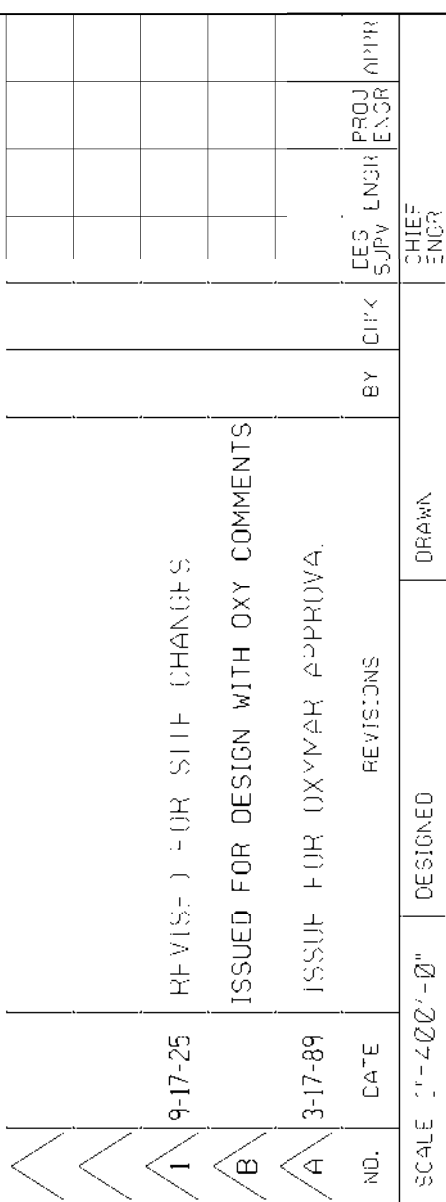
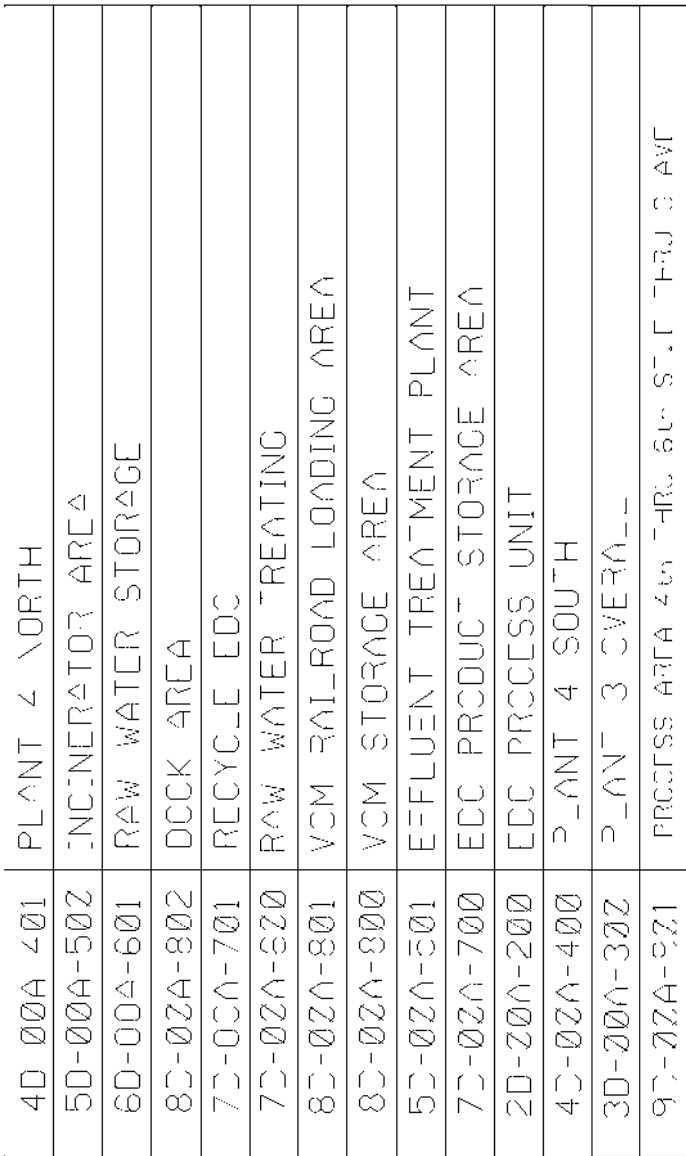
Dwg. 5D-A-051, Rev. 11 – CCIN-2 – WESP

Dwg. 5D-A-052, Rev. 9 – CCIN-2 – Superheater and Catalytic Oxidizer

Dwg. 5D-A-053, Rev. 10 – CCIN-2 – Cat Ox Preheater

Dwg. 5D-A-054, Rev. 9 – CCIN-2 – Cat Ox ID Fan and Stack





OXYMAR  
VCM PROJECT  
CORPUS CHRISTI, TEXAS



| REF NO | CUSTOMER NAME | RELASE | TELEPH | AREA DESIGNATION | TYPE | EWR NUMBER | A/E NUMBER |
|--------|---------------|--------|--------|------------------|------|------------|------------|
| 1      | HILLING       | RK     |        | J03 MC           | 961  | 9D-00A-900 | 1          |

CADD FILE NAME: C:\00A900,03\ [232,005]

## **Appendix B**

### **Alarm Operability**



## **Introduction**

40 CFR 63.1206(c)(3)(vii) requires the automatic waste feed cut-off (AWFCO) system and associated alarms to be tested at least weekly to verify operability, unless it is documented in the facility operating record that weekly testing unduly restrict or upset operations and that less frequent testing is adequate. However, at a minimum, the AWFCO system and associated alarms must be tested at least monthly. The AWFCO system for the HAF resides in the distributed control system (DCS). The DCS performs the test for all the alarm circuits almost continuously.

## **DCS Architecture**

The DCS is a digital process control and data acquisition system that consists of standard modular building blocks. The individual blocks are linked together by redundant cable, which comprises universal control networks (UCNs). Each module functionally stands alone to perform its pre-programed tasks. Together the modules provide distributed control and centralized monitoring capabilities so that the operators can recognize and react to situations at all process points in a quick and responsive manner. Built-in automatic diagnostics procedures alert the operator to potential equipment problems, and in many cases, automatically take corrective action to avert the problem.

Two types of modules operate at the process level and are called: 1) high performance process manager (HPM); and 2) Triconics PLC. These devices interface directly with the process measurement devices (e.g., level, flow, pressure, temperature transmitters, etc.). The control functions reside in the HPM (e.g., PID control, valve outputs, etc.). The AWFCO system resides in the Triconics PLC (e.g., waste feed cutoff valves, firebox burner management, etc.). To assure continuous process control, all HPM devices are redundant.

The Triconics is triple redundant to provide fault tolerant operation. Each device monitors the on-line computer and I/O cards continuously for malfunctions. If a malfunction is detected, the operator is notified across the UCN that a problem exists and automatically switches control to the redundant device. Complete control is always maintained.

Both the HPM and Triconics continuously monitor input functions for reasonable values (e.g., module failure, NO converter failure, and PV Range check) and the output functions by a readback check (checks the D/A converter). If a failure is detected, either the HPM or the Triconics will send an alarm to the operator immediately and under certain circumstances it

will automatically switch to the redundant partner. The Triconics also uses three-way voting of the I/O and the processors to provide complete fault tolerant operation. By design, if an output circuit to a control device loses continuity, the control device fails to the fail-safe position. For the liquid feed shutoff valves, this is in the closed position. There are also two valves in series that close to assure positive shutoff.

The HPM communicates with the operator via the UCN. The Triconics communicates through a redundant safety manager onto the same UCN. The UCN consists of two cables connecting all the process devices (HPMs and safety managers) to a network interface module (NIM). All devices on the "highway" continuously check the highway for faults. If a fault is found, the device issues an alarm to the operator and other devices on the highway. All the devices then switch to the redundant cable. To assure that the backup cable does not become damaged while not in use, the data highway automatically switches cables every 5 minutes.

The NIM interfaces the UCN to the local control network (LCN). The LCN is another dual cable data highway that interconnects different devices that are shared between several process networks (e.g., UCNs). For example, operators interface with the process on a universal station. The universal station resides on the LCN. The NIM is a redundant computer module that translates data transmission protocol on the UCN to/from the data transmission protocol on the LCN. The NIM also acts as a "data traffic cop" so that there is orderly data transmission.

Similar to the HPMs, if the active NIM malfunctions, the redundant NIM automatically takes full control of all the other NIM functions and an alarm is sent to the operator.

The LCN is continuously checked for malfunctions by all devices that reside on the LCN. If a device detects a fault on the current cable, it sends out an alarm to the operator and the other devices on the LCN. All devices then switch to the redundant cable. To assure that the backup cable does not become damaged while not in use, the LCN switches cables every 1 minute.

The operator views the process data on a universal station. All alarms are also received at this station. The VCM control room has multiple universal stations to provide sufficient access to the process and redundancy for the stations. Multiple stations are dedicated to the control of the area with the HAFs.

## **Alarm Checking**

Alarm checking is a task for the Triconics for shutdowns and the HPM for process alarms. When an alarm point is reached, the Triconics will first initiate any interlock actions that may be required. Then the Triconics will send the shutdown alarm signal along the UCN to the NIM. Any process alarms are sent from the HPM to the NIM. The NIM then assigns an alarm priority and sends out the alarm on the LCN to any and all devices that need the information. The universal station will receive the alarm signal and notify the operator by sounding an audible alarm and a LED indication light for the unit with the alarm. Alarm management at this point is very similar to the analog alarm annunciator boards. The operator can silence the alarm and then acknowledge the alarm.

## **AWFCO System Weekly Test Plan**

The alarm circuit path described above is continuously checked through extensive diagnostic programs on several computer devices. If a failure is found, as stated above, an alarm is sent to the operator immediately and, where appropriate, the system takes action to avert a problem that may be caused by the malfunction. On a weekly basis, this system is monitored at the universal station. The system status menu provides the status of each device on the UCN and LCN.

## **References**

- 1 Honeywell, Reference: System Summary -1 Volume TPS 3010-1, System Overview, Publication SW70-500, 1995.
- 2 Honeywell, Reference: System Summary -2 Volume TPS 3010-2, High Performance Process Manager Specification and Technical Data, Publication HP03-500, 1999.
- 3 Honeywell, Reference: System Summary -2 Volume TPS3010-2, TPS Process manager 110 Specification and Technical Data, Publication 1003-500, 1997.
- 4 Triconics, Reference: Tricon Planning & Installation Guide, 1998.

## **Attachment VI.**

### **Geology Report**

## **Geology Report**

The types of hazardous waste management units addressed by the permit renewal application do not require the inclusion of a geology report. As such, no geology report is included in the section of the application.

## **Attachment VII.A**

### **Facility Closure Plan and Cost Estimates**

**Table VII.A. – Unit Closure**

For each unit to be permitted, list the facility components to be decontaminated, the possible methods of decontamination, and the possible methods of disposal of wastes and waste residues generated during unit closure:

| Equipment of HWM Unit           | Possible Method of Decontamination <sup>1</sup>                             | Possible Methods of Disposal <sup>1</sup>                    |
|---------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------------|
| VCM CSA slab                    | Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes | Onsite via combustion or wastewater treatment and/or offsite |
| Tank C-720A slab                | Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes | Onsite via combustion or wastewater treatment and/or offsite |
| Tank C-720B slab                | Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes | Onsite via combustion or wastewater treatment and/or offsite |
| Tank C-720A                     | Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes | Onsite via combustion or wastewater treatment and/or offsite |
| Tank C-720B                     | Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes | Onsite via combustion or wastewater treatment and/or offsite |
| Tank C-720A ancillary equipment | Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes | Onsite via combustion or wastewater treatment and/or offsite |
| Tank C-720B ancillary equipment | Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes | Onsite via combustion or wastewater treatment and/or offsite |
| Halogen Acid Furnace CCIN-1     | Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes | Onsite via combustion or wastewater treatment and/or offsite |
| Halogen Acid Furnace CCIN-2     | Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes | Onsite via combustion or wastewater treatment and/or offsite |



| Equipment of HWM Unit                              | Possible Method of Decontamination <sup>1</sup>                             | Possible Methods of Disposal <sup>1</sup>                    |
|----------------------------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------------|
| Halogen Acid Furnace<br>CCIN-1 ancillary equipment | Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes | Onsite via combustion or wastewater treatment and/or offsite |
| Halogen Acid Furnace<br>CCIN-2 ancillary equipment | Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes | Onsite via combustion or wastewater treatment and/or offsite |

1. Applicants may list more than one appropriate method.

**Table VII.E.1. - Permitted Unit Closure Cost Summary**

| Existing Unit Closure Cost Estimate                    |           |             |
|--------------------------------------------------------|-----------|-------------|
| Unit                                                   |           | Cost        |
| VCM Container Storage Area                             |           | \$159,937   |
| Tank C-720A                                            |           | \$1,148,730 |
| Tank C-720B                                            |           | \$1,148,730 |
| Secondary Containment for Tanks                        |           | \$199,665   |
| Halogen Acid Furnace CCIN-1                            |           | \$185,076   |
| Halogen Acid Furnace CCIN-2                            |           | \$185,076   |
| Total Existing Unit Closure Cost Estimate <sup>1</sup> | Year 2024 | \$3,027,214 |

| Proposed Unit Closure Cost Estimate                |  |      |
|----------------------------------------------------|--|------|
| Unit                                               |  | Cost |
|                                                    |  |      |
|                                                    |  |      |
|                                                    |  |      |
|                                                    |  |      |
|                                                    |  |      |
|                                                    |  |      |
| Total Proposed Unit Closure Cost Estimate Footnote |  |      |

1 As units are added or deleted from these tables through future permit amendments or modifications, the remaining itemized unit costs should be updated for inflation when re-calculating the revised total cost in current dollars.

**Attachment VII.A**

**Facility Closure Plan**

**OxyChem**  
**Ingleside, Texas**

## Table of Contents

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## 1.0 Introduction

OxyChem operates a chemical production facility in Ingleside, Texas. As such, the facility has various onsite units subject to RCRA permitting that support operations. This Facility Closure Plan has been provided pursuant to the requirements of 40 CFR Part 264.112 to outline the procedures for closure of the entire RCRA facility. RCRA closure plans for individual units are provided in this application as Attachments VII.A.1 (VCM CSA), VII.A.2 (Tank C-720A), VII.A.3 (Tank C-720B), VII.A.4 (HAF CCIN-1), and VII.A.5 (HAF CCIN-2). Those plans detail how specific units will be closed, and this plan outlines how the RCRA facility (i.e., all active RCRA permitted units) would be closed.

This Facility Closure Plan and the individual unit closure plans have been prepared to address the following regulatory requirements:

- Closure requirements - 40 CFR Part 264, Subpart G;
- Closure requirements for container storage areas - 40 CFR 264.178;
- Closure requirements for tanks - 40 CFR 264.197;
- Closure requirements for boilers and industrial furnaces - 40 CFR 266.102(a)(2)(vii);
- Closure and Remediation - 30 TAC 335.8; and
- Texas Risk Reduction Program (TRRP) - 30 TAC Chapter 350.

This Facility Closure Plan and the individual unit closure plans detail closure procedures that:

- Minimizes the need for further maintenance;
- Controls, minimizes, or eliminates post-closure escape of hazardous waste, constituents, leachate, contaminated run-off, or waste decomposition to the ground, surface waters, or atmosphere (to the extent necessary to protect human health and the environment);
- Hazardous waste and hazardous waste residues will be removed from the unit; and
- Complies with the above regulatory requirements for closure.

## **2.0 Unit and Waste Descriptions**

Descriptions of hazardous waste management units and wastes managed within those units are provided in the individual closure plans contained in Attachments VII.A.1 through VII.A.5.

### **3.0 Closure Plan**

Closure activities for individual units are specified in the closure plans contained in Attachments VII.A.1 through VII.A.5. During final RCRA facility closure, the closure plans associated with active RCRA units would be implemented to achieve final facility closure. As such, the plan for facility closure is to aggregate the unit closure plans for the active units. The aggregated closure plan provides for the following:

- Closure plans that outline specific procedures, which can be implemented at any point in the unit or facility's life;
- Descriptions of how each unit will be closed;
- Description of how the facility would be closed with maximum extent of operations being defined to include all active, permitted RCRA hazardous waste management units;
- The maximum inventory of hazardous waste is the sum of the maximum inventories specified for the individual units; and
- Detailed closure procedures and performance standards are specified in unit closure plans.



## **4.0 Notification of Closure Activities**

OxyChem will notify TCEQ in writing of closure activities at least 45 days prior to the date on which final facility closure is expected to commence. Such notification will be sent to both the TCEQ Central Office and the appropriate TCEQ District Office. OxyChem will also notify TCEQ in writing at least 10 days before beginning field activities or sampling to afford TCEQ personnel the opportunity to observe closure activities and/or split samples.

## 5.0 Closure Certification

Once closure of all units is complete, facility units closed during final facility closure will be inspected by OxyChem and an independent Professional Engineer (P.E.) licensed in the State of Texas. Within 60 days of completing closure of units closed during facility closure, OxyChem will submit to the Executive Director of the TCEQ (by registered mail) a certification from the independent P.E. that the facility was closed in accordance with the specifications contained in the approved Facility Closure Plan. In addition, this certification, signed by both a facility representative and an independent P.E., will include documentation supporting the P.E.'s certification.

The closure certification report will include and be supported by unit closure certification reports containing:

- A summary of closure activities performed;
- Locations of where verification, concrete, and soil samples were taken; and
- Results of analyses for all of the verification samples, concrete samples, and soil samples.

Drawings included in the reports will identify sample locations and depths with identification numbers that are cross-referenced to sample results. In addition, reports will include the results of visual inspections performed both during and after closure.

## **6.0 Permit Modification**

If a change in the approved closure plan is required, OxyChem will submit a permit modification to the TCEQ requesting authorization of a change in the plan. Such a modification will occur, at a minimum, under the following circumstances:

- Changes in operating plans or facility design that affect the closure plan;
- There is a change in the expected year of closure; and/or
- During closure activities, unexpected events require modification of the approved closure plan.

In addition, if the Executive Director requests modifications to the Closure Plan, OxyChem will submit these modifications within 60 days of the Executive Director's request or within 30 days if changes occur during the closure.

## **7.0 Closure Schedule**

Schedules for unit closures are specified in unit closure plans and would be implemented concurrently (to the extent possible) to achieve facility closure. The estimated facility closure schedule would require 180 days to complete.

This schedule does not account for delays that may be caused by force majeure, including without limitations, fires, floods, riots, or strikes. If any of the aforementioned circumstances occur, OxyChem will submit a written request to the Executive Director of the TCEQ to extend the time allowed for closure.

## **8.0 Closure Cost Estimates**

Estimated closure costs are reflected in the individual unit closure plans in Attachments VII.A.1 through VII.A.5.

## **Attachment VII.A.1**

### **VCM Container Storage Area**

### **Closure Plan and Cost Estimate**

**OxyChem**  
**Ingleside, Texas**

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## 1.0 Introduction

OxyChem operates a chemical production facility in Ingleside, Texas. In conjunction with these activities, a variety of hazardous wastes are generated at the facility. In support of hazardous waste management, the VCM Container Storage Area is a permitted container storage area used to store hazardous waste for greater than 90 days. As such, it is subject to RCRA Part B permitting requirements for closure, which are addressed in this Closure Plan.

This Closure Plan has been prepared to address the following regulatory requirements:

- Closure requirements - 40 CFR Part 264, Subpart G;
- Closure requirements for container storage areas - 40 CFR 264.178;
- Closure and Remediation - 30 TAC 335.8; and
- Texas Risk Reduction Program (TRRP) - 30 TAC Chapter 350.

The VCM Container Storage Area Report, which contains design drawings of the unit, is provided as Attachment V.B.1 of this application. Other information (e.g., operational, compliance, etc.) regarding the unit is also provided in the unit report (Attachment V.B.1). Under procedures detailed herein, OxyChem will close the VCM Container Storage Area in a manner that:

- Minimizes the need for further maintenance;
- Controls, minimizes, or eliminates post-closure escape of hazardous waste, constituents, leachate, contaminated run-off, or waste decomposition to the ground, surface waters or atmosphere (to the extent necessary to protect human health and the environment);
- Hazardous waste and hazardous waste residues will be removed from the unit; and
- Complies with the above regulatory requirements for closure.

A description of the VCM Container Storage Area is contained in Section 2.0, and as mentioned above, detailed descriptions of unit design and operation are provided in other attachments.

Closure procedures for the unit are described in Section 3.0 with specific steps necessary to perform the closure found in Section 3.3. Sections 7.0 and 8.0 reflect the closure schedule as well as closure cost estimate.

## **2.0 Unit and Waste Descriptions**

As described, OxyChem operates the VCM Container Storage Area, which is subject to permitting standards. The unit is used to manage waste streams, which are classified as RCRA hazardous. Since the unit can store any wastes managed at the facility, it would manage all wastes reflected in the Waste Analysis Plan (Attachment IV.D).

Based on waste characterization information for these waste streams, primary constituents are those reflected in Table 1.

### **3.0 Closure Plan**

Activities specified in this section are for closure of the VCM Container Storage Area. Activities necessary for final facility closure per the requirements of 40 CFR 264.112(b) are specified in the Facility Closure Plan (Attachment VII.A of this application).

#### **3.1 Closure Scenario**

It is expected that closure activities described in this plan will be performed by OxyChem personnel and/or its contractors. However, closure costs reflected in this plan are based on the "worst-case" closure requirements of 40 CFR §264.142 and TCEQ recommendations contained in the Industrial Solid Waste Technical Guideline No. 10 (12/7/2017). As such, closure costs are based upon closure of the facility by a third-party at the point in time in the facility's active life when the extent and manner of its operation would make closure most expensive.

#### **3.2 Oversight by a Professional Engineer**

Closure activities will be supervised by OxyChem personnel as well as a professional engineer (P.E.) licensed in the State of Texas. Following completion of closure, the P.E. will prepare a closure certification report in accordance with the criteria specified in Section 5.

The VCM Container Storage Area is constructed with a reinforced concrete slab. The P.E. certifying closure will visually inspect the unit and associated concrete slab and surrounding areas prior to beginning closure activities to determine candidate locations for sampling soils. Items to be noted during the visual inspection include, but are not limited to the following:

- Indication of leaks;
- Significant stained areas;
- Condition of seams and expansion joints;
- Cracks in the concrete in the vicinity of the unit; and
- Location of drain piping and/or sumps.

Based on the visual inspection, the P.E. will determine locations for collection of soil samples. If, during inspection of the concrete surfaces, areas with significant damage (e.g., separated concrete, extensive concrete patching, etc.) are observed, the P.E. will collect concrete

samples (in addition to soil) from these locations. The P.E. will review closure activities and certify that closure was completed according to the approved closure plan.

### **3.3 Closure Procedures**

OxyChem intends to "clean close" the VCM Container Storage Area in accordance with all relevant closure requirements. The approach for closure will consist of removal and/or decontamination of waste and waste residues, contaminated containment system components, contaminated soils (if any), and structures and equipment contaminated with wastes. At this time, OxyChem does not anticipate beginning closure of these units until after the year 2040. Further details regarding closure procedures proposed are described in the following sections.

The procedures for closure of the VCM Container Storage Area will include the following steps.

- Step 1 - Removal of waste and waste residues (including disposal of rinsate);
- Step 2 - Collection of verification samples;
- Step 3 - Collection of concrete (if required) and soil samples;
- Step 4 - Equipment decontamination; and
- Step 5 - Demonstration that TRRP requirements have been met (if a release has occurred).

#### **Step 1 - Removal of Waste and Waste Residues**

As part of the closure activities for the VCM Container Storage Area, waste present in containers in the unit and any waste residues that may be present will be removed from the unit. Containers will be removed from the unit and transported to an authorized facility for subsequent management.

After removal of the waste containers, the VCM Container Storage Area will be taken out of service for further decontamination, which will consist of decontamination of the concrete slab surfaces. Decontamination will be performed using water rinsing and/or abrasive removal.

Water rinsing would consist of a high-pressure wash or other appropriate method such as, but not limited to detergent wash and/or chemical wash. Concrete slab surfaces will be decontaminated by rinsing each surface three times (i.e., triple rinsing). Rinsewater will be

potable, service, and/or deionized water. Rinsewater will be collected in containers (e.g., tank trucks, frac tanks, drums, etc.) and properly disposed of depending on its waste classification and LDR status.

In lieu of water rinsing, concrete slab surfaces may be decontaminated using abrasive removal. Abrasive removal would consist of using a blasting media (e.g., sand, plastic bead, slag, etc.) and/or physical removal (e.g., scraping, sanding, etc.). Decontamination will be accomplished when visible residue has been removed. Waste blast material (i.e., blasting media and/or removed residue) will be collected in containers (e.g., drums, roll-offs, etc.) and properly disposed of depending on its waste classification and LDR status. Multiple blasting events may be performed to achieve visual decontamination.

## **Step 2 - Collection of Verification Samples**

After visible signs of contamination are removed as described in Step 1, OxyChem will collect verification samples to demonstrate that removal of all waste residues has occurred and decontamination has been achieved. If water rinsing is used to achieve decontamination, verification samples will be collected from the final rinsate. If abrasive removal is used to achieve decontamination, verification samples will be collected from either the final batch of blast material or from wipe samples of the decontaminated surfaces.

Verification samples will be analyzed for the hazardous constituents identified in Table 1, which have been selected as representative of constituents in wastes managed in the unit. Analytical results from verification samples will first be assessed to determine if any constituents are detected. If no constituents are detected in the samples, the unit will be considered decontaminated. If constituents are detected, their levels will be compared to the Tier 1 protective concentration levels (PCLs) for residential land use specified in TRRP. If levels are below Tier 1 residential PCLs, the unit will be considered decontaminated. If analytical results do not reflect that the unit has been decontaminated, Steps 1 and 2 may be repeated until specified cleanup criteria are met.

As an alternate to decontamination, OxyChem may elect, based on sample results, to remove and dispose of contaminated structures to achieve closure. Should the facility elect to achieve closure through removal and disposal, all relevant RCRA management procedures (e.g., waste classification, manifesting, LDR requirements, etc.) will be met.

### **Step 3 - Collection of Concrete and Soil Samples**

To verify that a release has not occurred from the unit, soil samples will be collected. Further, if the P.E. determines that samples should be collected, they will be obtained per the procedures reflected below. The following procedures will be used for collection of samples from each material.

#### **Concrete Samples**

If concrete samples are collected from the concrete slab associated with the unit, the decision to collect them will be made by the supervising P.E. based on the visible inspection of concrete. As reflected in Section 3.2, the P.E. will be looking for areas that exhibit signs of significant damage.

Concrete samples would be analyzed for the presence of the hazardous constituents listed in Table 1. If no constituents are detected in the concrete sample(s), the concrete will be considered clean. If constituents are detected, measured values will be compared with waste classification and TRRP levels to determine disposition of the concrete.

In the event analysis of concrete samples indicates that the concentration of constituents do not meet the criteria for clean closure (i.e., Tier 1 residential PCLs), OxyChem may also determine if the delineated sampling areas were representative of the entire concrete pad or if additional samples will be required to obtain a defined characterization of the extent of contamination.

#### **Soil Samples**

To determine if soil has been contaminated with hazardous wastes or hazardous constituents, soil samples will be collected in the vicinity of the unit. At least two soil samples will be obtained from soils under or in close proximity to (i.e., near the edge of) the concrete. The decision to collect more than two soil samples will be made by the supervising P.E. based on the visible inspection of the concrete. As reflected in Section 3.2, the P.E. will be looking for areas that exhibit signs of contamination, staining, or deterioration.

Soil samples will be analyzed for the presence of hazardous constituents listed in Table 1. If no constituents are detected in the soil sample(s), a determination will be made that no release has occurred from the unit. If constituents are detected, measured values will be assessed in accordance with TRRP to determine appropriate action. If levels are below Tier 1 residential PCLs, a determination will be made that no releases to soil have occurred.



In the event analysis of soil samples indicates that the concentration of constituents do not meet the criteria for clean closure (i.e., are above Tier 1 residential PCLs), OxyChem may also determine if the delineated sampling areas were representative of the entire area or if additional samples will be required to obtain a defined characterization of the extent of contamination.

#### **Step 4 - Equipment Decontamination**

Non-disposable equipment used during closure that comes in contact with the waste material will be decontaminated using water and non-ionic soap followed by a potable, service, and/or deionized water rinse. Disposable equipment will be disposed of at an authorized facility.

Equipment or system component that cannot be cleaned may also be disposed of at an authorized facility. Washwater will be directed to a sump or a temporary collection point (e.g., vacuum truck) and transferred to an authorized facility.

Non-disposable sampling equipment will be cleaned prior to collection of any samples and after the collection of each sample using a detergent and deionized or distilled water wash followed by a deionized or distilled water rinse.

#### **Step 5 - TRRP Demonstration**

If, through analysis of soil samples, it is determined that a release from the unit has occurred to underlying soils, then a demonstration of compliance with TRRP will be performed. This includes preparation of all applicable reports and demonstration that the remedy standard has been met. If a release has occurred, the objective will be to meet Remedy Standard A criteria to achieve clean closure. In the event that Remedy Standard A criteria cannot be met and Remedy Standard B is performed, OxyChem will obtain all required TRRP and RCRA approvals/authorizations.

## **4.0 Notification of Closure Activities**

OxyChem will notify TCEQ in writing of closure activities at least 45 days prior to the date on which the facility expects final closure to commence. Such notification will be sent to both the TCEQ Central Office and the appropriate TCEQ District Office. OxyChem will also notify TCEQ in writing at least 10 days before beginning field activities or sampling to afford TCEQ personnel the opportunity to observe closure activities and/or split samples.

## 5.0 Closure Certification

Once closure of the VCM Container Storage Area is complete, the unit will be inspected by OxyChem and an independent P.E. licensed in the State of Texas. Within 60 days of completing closure of the unit, OxyChem will submit to the Executive Director of the TCEQ (by registered mail) a certification from this independent P.E. that the unit was closed in accordance with the specifications contained in the approved Closure Plan. In addition, this certification, signed by both a facility representative and an independent P.E., will include documentation supporting the P.E.'s certification.

The closure certification report will include:

- A summary of closure activities performed;
- Locations of where verification, concrete (if collected), and soil samples were taken; and
- Results of analyses for all of the verification samples, concrete samples (if collected), and soil samples.

Drawings included in the report will identify sample locations and depths with identification numbers that are cross-referenced to sample results. In addition, the report will include the results of visual inspections performed both during and after closure.

## **6.0 Permit Modification**

If a change in the approved closure plan is required, OxyChem will submit a permit modification to the TCEQ requesting authorization of a change in the plan. Such a modification will occur, at a minimum, under the following circumstances:

- Changes in operating plans or facility design that affect the closure plan;
- There is a change in the expected year of closure; and/or
- During closure activities, unexpected events require modification of the approved closure plan.

In addition, if the Executive Director requests modifications to the Closure Plan, OxyChem will submit these modifications within 60 days of the Executive Director's request or within 30 days if changes occur during the closure.

## **7.0 Closure Schedule**

A closure schedule for the unit is provided in Table 2. This table also indicates the estimated number of days required to complete each step of the closure task. The total number of days anticipated to close the VCM Container Storage Area following notification to the TCEQ is 115 days.

This schedule does not account for delays that may be caused by force majeure, including without limitations, fires, floods, riots, or strikes. If any of the aforementioned circumstances occur, OxyChem will submit a written request to the Executive Director of the TCEQ to extend the time allowed for closure.

## 8.0 Closure Cost Estimate

Estimated closure costs for the VCM Container Storage Area are detailed in Table 3 and supporting information for the estimates is provided in Appendix A. The estimated costs for closure of the unit were updated with a July 2020 permit modification and subsequently reviewed and approved by TCEQ. Estimates were developed in accordance with the requirements set forth in 40 CFR 264.142 and TCEQ recommendations contained in the Industrial Solid Waste Technical Guideline No. 10 (12/7/2017). As such, this estimate reflects "worst case" conditions at the time of closure. The Table 3 cost estimates are based on the 2019 values that have been updated using the inflation factors for 2020 to 2024 ( $1.012 \times 1.042 \times 1.070 \times 1.036 \times 1.024 = 1.197$ ), which results in a multiplier of 1.197.

Activities reflected in this estimate may differ somewhat from the activities that would be conducted by a closure led by OxyChem. In addition, this cost estimate is based on the fact that these facilities are constructed on a concrete slab and that the facility has had no record of a release to the environment. The following summarizes the basis of the closure cost estimates:

- Closure will commence at a point in the facility's operating life when closure is the most expensive;
- Closure is based on abandonment of the site at full capacity;
- Closure activities are performed by a third party;
- The units are at capacity at the time of closure;
- Containment will prevent entry of rainwater into the closure area during stormwater events;
- The hazardous waste units and concrete will be cleaned using high pressure/steam cleaning;
- For each sampling event, one sample will be collected from each hazardous waste unit and the rinsewater;

- It is assumed that the units will be triple rinsed and then samples collected and analyzed;
- It is assumed that two concrete and two soil samples will be collected and analyzed to determine potential contamination of concrete and soil;
- Liquid waste and washwaters will be disposed offsite; and
- Solid and sludge wastes will be shipped offsite for disposal at an authorized TSD facility.



## **Tables**

**Table 1 Sample Analysis Methods**

| Unit    | Constituents          | EPA Analytical Methods |
|---------|-----------------------|------------------------|
| VCM CSA | Volatile Organics     | SW-846 8260            |
| VCM CSA | Semivolatile Organics | SW-846 8270            |

**Table 2 Closure Schedule**

| Activity                                                    | Schedule (days)     |
|-------------------------------------------------------------|---------------------|
| Notify TCEQ of closure                                      | 45 (prior to start) |
| <b>Closure activities begin – after 45 day notification</b> |                     |
| Remove wastes                                               | 5                   |
| Decontaminate unit                                          | 4                   |
| Collect rinsate, concrete (if collected), and soil samples  | 3                   |
| Analyze rinsate, concrete (if collected), and soil samples  | 21                  |
| Re-rinse, resamples, and reanalyze, if necessary            | 22                  |
| Prepare certification of closure report                     | 60                  |
| Total number of days for closure                            | 115                 |

**Table 3 Closure Cost Estimate for VCM Container Storage Area**

| Task                                    | Cost      |
|-----------------------------------------|-----------|
| Removal and Disposal of Waste           | \$120,390 |
| Decontamination of Slab                 | \$10,319  |
| Equipment Decontamination               | \$2,236   |
| Verification Sampling                   | \$10,388  |
| Engineering Inspection/Supervision      | \$2,064   |
| Subtotal:                               | \$145,397 |
| 10% Contingency                         | \$14,540  |
| Total Unit Closure Cost (2024 Dollars): | \$159,937 |

## **Appendix A**

### **Supporting Information for Closure Cost Estimate**

### Closure Cost Estimate for VCM CSA

| Activity                                                                                                                  | Estimated Cost, \$K <sup>1</sup> |
|---------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| <b>Waste removal and disposal of drums</b>                                                                                | \$70                             |
| 3 hrs of labor @ \$185/hr                                                                                                 |                                  |
| 168 drums @ \$400/drum disposal (as a hazardous waste)                                                                    |                                  |
| 2 trip @ \$1,348/trip transportation                                                                                      |                                  |
| <b>Decontaminate CSA with water and detergent flush with off-site hazardous waste disposal of all rinsate<sup>2</sup></b> | \$6                              |
| 16 hrs of labor @ \$185/hr                                                                                                |                                  |
| 646 gallons of washwater @ \$1.67/gallon                                                                                  |                                  |
| 5,388 lbs of washwater for disposal                                                                                       |                                  |
| 1 trip @ \$1,348/trip transportation @ \$0.20/lb                                                                          |                                  |
| <b>Decontaminate clean-up equipment</b>                                                                                   | \$1.3                            |
| <b>Sample, excavate, and dispose of surrounding soils as HW</b>                                                           | \$20                             |
| 12 hrs of labor @ \$185/hr                                                                                                |                                  |
| 1 day backhoe rental @ \$1,200/day                                                                                        |                                  |
| 23,760 pounds @ \$0.65/lb <sup>3</sup>                                                                                    |                                  |
| 1 trip @ \$1,348/trip                                                                                                     |                                  |
| <b>Laboratory charges</b>                                                                                                 | \$5                              |
| 2 water samples @ \$215 per analysis                                                                                      |                                  |
| 4 soil samples @ \$1,035 per analysis                                                                                     |                                  |
| <b>Engineer's inspection and certification</b>                                                                            | \$1.2                            |
| 10 hrs labor @ \$115/hr                                                                                                   |                                  |
| <b>Subtotal</b>                                                                                                           | \$104                            |
| <b>25% Contingency</b>                                                                                                    | \$26                             |
| <b>VCM CSA Total</b>                                                                                                      | \$130                            |

<sup>1</sup> 2000 Dollars.

<sup>2</sup> An estimated 0.75 gallons per square foot of washwater will be needed to decontaminate the CSA secondary containment slab.

<sup>3</sup> See Appendix VII.A.-1 calculations for this volume.

## **Attachment VII.A.2**

### **Tank C-720A**

### **Closure Plan and Cost Estimate**

**OxyChem**  
**Ingleside, Texas**

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## 1.0 Introduction

OxyChem operates a chemical production facility in Ingleside, Texas. In conjunction with these activities, a variety of hazardous waste streams are generated at the facility. In support of hazardous waste management, Tank C-720A is a permitted tank used to store hazardous waste for greater than 90 days. As such, it is subject to RCRA Part B permitting requirements for closure, which are addressed in this Closure Plan.

This Closure Plan has been prepared to address the following regulatory requirements:

- Closure requirements - 40 CFR Part 264, Subpart G;
- Closure requirements for tanks - 40 CFR 264.197;
- Closure and Remediation - 30 TAC 335.8; and
- Texas Risk Reduction Program (TRRP) - 30 TAC Chapter 350.

The Tank C-720A Report, which contains design drawings of the unit, is provided as Attachment V.C.1 of this application. Other information (e.g., operational, compliance, etc.) regarding the tank is also provided in the unit report (Attachment V.C.1). Under procedures detailed herein, OxyChem will close Tank C-720A in a manner that:

- Minimizes the need for further maintenance;
- Controls, minimizes, or eliminates post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground, surface waters or atmosphere (to the extent necessary to protect human health and the environment);
- Hazardous waste and hazardous waste residues will be removed from the unit; and
- Complies with the above regulatory requirements for closure.

A description of Tank C-720A is contained in Section 2.0, and as mentioned above, detailed descriptions of tank design and operation are provided in other attachments. Closure procedures for the unit are described in Section 3.0 with specific steps necessary to perform the closure found in Section 3.3. Sections 7.0 and 8.0 reflect the closure schedule as well as closure cost estimate.



## 2.0 Unit and Waste Descriptions

As described, OxyChem operates Tank C-720A, which is subject to permitting standards. The tank is used to manage waste streams, which are classified as RCRA hazardous. Tank C-720A is an elevated, spherical tank with a nominal capacity of 65,000 gallons. The tank collects and stores hazardous wastes generated from both onsite and offsite sources prior to subsequent treatment in one of two onsite Halogen Acid Furnaces (CCIN-1 and CCIN-2) . Tank C-720A handles the following wastes:

- Waste oil;
- VCM heavy ends;
- VCM light ends;
- Mother liquor; and
- EDC heavy ends.

Based on expected waste characterization information for these waste streams, primary constituents are those reflected in Table 1.

### **3.0 Closure Plan**

Activities specified in this section are for closure of Tank C-720A. Activities necessary for final facility closure per the requirements of 40 CFR 264.112(b) are specified in the Facility Closure Plan (Attachment VII.A of this application).

#### **3.1 Closure Scenario**

It is expected that closure activities described in this plan will be performed by OxyChem personnel and/or contractors selected by the facility. However, closure costs reflected in this plan are based on the "worst-case" closure requirements of 40 CFR 264.142 and TCEQ recommendations contained in the Industrial Solid Waste Technical Guideline No. 10 (12/7/2017). As such, closure costs are based upon closure of the facility by a third-party at the point in time in the facility's active life when the extent and manner of its operation would make closure most expensive.

#### **3.2 Oversight by a Professional Engineer**

Closure activities will be supervised by OxyChem personnel as well as an independent professional engineer (P.E.) licensed in the State of Texas. Following completion of closure, the P.E. will prepare a closure certification report in accordance with the criteria specified in Section 5.

Tank C-720A will be located within a secondary containment vault/external liner. The P.E. certifying closure will visually inspect the unit and associated concrete vault/liner and surrounding areas prior to beginning closure activities to determine candidate sampling locations for soils. Items to be noted during the visual inspection include, but are not limited to the following:

- Indication of leaks;
- Significant stained areas;
- Condition of seams and expansion joints;
- Cracks in the concrete in the vicinity of the unit; and
- Location of drain piping and/or sumps.

Based on the visual inspection, the P.E. will determine locations for collection of soil samples. If, during inspection of the concrete surfaces, areas with significant damage (e.g.,

separated concrete, extensive concrete patching, etc.) are observed, the P.E. will collect concrete samples (in addition to soil) from these locations. The P.E. will review closure activities and certify that closure was completed according to the approved closure plan.

### **3.3 Closure Procedures**

OxyChem intends to "clean close" Tank C-720A in accordance with all relevant closure requirements. The approach for closure will consist of removal and/or decontamination of waste and waste residues, contaminated containment system components, contaminated soils (if any), and structures and equipment contaminated with wastes. At this time, OxyChem does not anticipate beginning closure of these units until after the year 2040. Further details regarding proposed closure procedures are described in the following sections.

The procedures for closure of Tank C-720A will include the following steps.

- Step 1 - Removal of waste and waste residues (including disposal of rinsate);
- Step 2 - Collection of verification samples;
- Step 3 - Collection of concrete (if required) and soil samples;
- Step 4 - Equipment decontamination; and
- Step 5 - Demonstration that TRRP requirements have been met (if a release has occurred).

#### **Step 1 - Removal of Waste and Waste Residues**

As part of the closure activities for the tank, waste or waste residues that may be present will be removed from the following components:

- Tank interior;
- Piping and ancillary equipment; and
- Concrete surfaces of the secondary containment system/secondary containment shell.

Removal of waste residues that may be present will first be accomplished by pumping remaining waste that may be present in the unit, piping, and ancillary equipment into containers for subsequent management at an authorized facility. Waste stream piping will then be purged back to its source and disconnected from the tank.

After these initial activities, the tank will be taken out of service for further decontamination, which will consist of removal of waste residues (e.g., removal of any sludge in the tank) and decontamination of tank interior surfaces through rinsing and/or abrasive removal (e.g., scraping, blasting, pressure rinsing, etc.). Any sludge present in the tank will be removed, placed in containers, and disposed of at an authorized facility.

Decontamination will be performed using water rinsing and/or abrasive removal. Water rinsing would consist of a high-pressure wash or other appropriate method such as, but not limited to, detergent wash and/or chemical wash. Surfaces (e.g., piping interior, tank interior, and concrete slab) will be decontaminated by rinsing each surface three times (i.e., triple rinsing). Rinsewater will be potable, service, and/or deionized water. Piping and ancillary equipment will be decontaminated by rinsing with a minimum of three piping volumes of rinsewater through the piping system with rinsewater being collected in containers (e.g., tank trucks, frac tanks, drums, etc.) and properly disposed of depending on its waste classification and LDR status.

In lieu of water rinsing, surfaces (e.g., piping interior, tank interior, concrete surface) may be decontaminated using abrasive removal. Abrasive removal would consist of using a blasting media (e.g., sand, plastic bead, slag, etc.) and/or physical removal (e.g., scraping, sanding, etc.). Decontamination will be accomplished when visible residue has been removed. Waste blast material (i.e., blasting media and/or removed residue) will be collected in containers (e.g., drums, roll-offs, etc.) and properly disposed of depending on its waste classification and LDR status. Multiple blasting events may be performed to achieve visual decontamination.

## **Step 2 - Collection of Verification Samples**

After visible signs of contamination are removed as described in Step 1, OxyChem will collect verification samples to demonstrate that removal of all waste residues has occurred and decontamination has been achieved. If water rinsing is used to achieve decontamination, verification samples will be collected from the final rinsate. If abrasive removal is used to achieve decontamination, verification samples will be collected from

either the final batch of blast material or from wipe samples of the decontaminated surfaces. One verification sample will be collected from each activity (i.e., one from decontamination of piping, one from decontamination of tank interior, and one from decontamination of concrete surface).

Verification samples will be analyzed for the hazardous constituents identified in Table 1, which have been selected as representative of constituents in wastes managed in the tank. Analytical results from verification samples will first be assessed to determine if any constituents are detected. If no constituents are detected in the samples, the unit will be considered decontaminated. If constituents are detected, their levels will be compared to the Tier 1 protective concentration levels (PCLs) for residential land use specified in TRRP. If levels are below Tier 1 residential PCLs, the unit will be considered decontaminated. If analytical results do not reflect that the unit has been decontaminated, Steps 1 and 2 may be repeated until specified cleanup criteria are met.

As an alternate to decontamination, OxyChem may elect, based on sample results, to remove and dispose of contaminated structures to achieve closure. Should OxyChem elect to achieve closure through removal and disposal, all relevant RCRA management procedures (e.g., waste classification, manifesting, LDR requirements, etc.) will be met.

### **Step 3 - Collection of Concrete and Soil Samples**

To verify that a release has not occurred from the unit, soil samples will be collected. Further, if the P.E. determines that concrete samples should be collected, they will be obtained per the procedures reflected below. The following procedures will be used for collection of samples from each material.

#### **Concrete Samples**

If concrete samples are collected from the concrete slab associated with the tank, the decision to collect them will be made by the supervising P.E. based on the visible inspection of concrete. As reflected in Section 3.2, the P.E. will be looking for areas that exhibit signs of significant damage.

Concrete samples would be analyzed for the presence of the hazardous constituents listed in Table 1. If no constituents are detected in the concrete sample(s), the concrete will be considered clean. If constituents are detected, measured values will be compared with waste classification and TRRP levels to determine disposition of the concrete.

In the event analysis of concrete samples indicates that the concentration of constituents do not meet the criteria for clean closure (i.e., Tier 1 residential PCLs), OxyChem may also determine if the delineated sampling areas were representative of the entire concrete pad or if additional samples will be required to obtain a defined characterization of the extent of contamination.

### **Soil Samples**

To determine if soil has been contaminated with hazardous wastes or hazardous constituents, soil samples will be collected in the vicinity of the unit. At least two soil samples will be obtained from soils under or in close proximity to (i.e., near the edge of) the concrete. The decision to collect more than two soil samples will be made by the supervising P.E. based on the visible inspection of the concrete. As reflected in Section 3.2, the P.E. will be looking for areas that exhibit signs of contamination, staining, or deterioration.

Soil samples will be analyzed for the presence of hazardous constituents listed in Table 1. If no constituents are detected in the soil sample(s), a determination will be made that no release has occurred from the unit. If constituents are detected, measured values will be assessed in accordance with TRRP to determine appropriate action. If levels are below Tier 1 residential PCLs, a determination will be made that no releases to soil have occurred.

In the event analysis of soil samples indicates that the concentration of constituents do not meet the criteria for clean closure (i.e., are above Tier 1 residential PCLs), OxyChem or the P.E. may also determine if the delineated sampling areas were representative of the entire area or if additional samples will be required to obtain a defined characterization of the extent of contamination.

### **Step 4 - Equipment Decontamination**

Non-disposable equipment used during closure that comes in contact with the waste material will be decontaminated using water and non-ionic soap followed by a potable, service, and/or deionized water rinse. Disposable equipment will be disposed of at an authorized facility. Equipment or system components that cannot be cleaned may also be disposed of at an authorized facility. Washwater will be directed to a sump or a temporary collection point (e.g., vacuum truck) and transferred to an authorized facility.

Non-disposable sampling equipment will be cleaned prior to collection of any samples and after the collection of each sample using a detergent and deionized or distilled water wash followed by a deionized or distilled water rinse.

### **Step 5 - TRRP Demonstration**

If, through analysis of soil samples, it is determined that a release from the unit has occurred to underlying soils, then a demonstration of compliance with TRRP will be performed. This includes preparation of all applicable reports and demonstration that the remedy standard has been met. If a release has occurred, the objective will be to meet Remedy Standard A criteria to achieve clean closure. In the event that Remedy Standard A criteria cannot be met and Remedy Standard B is performed, OxyChem will obtain all required TRRP and RCRA approvals/authorizations.



## **4.0 Notification of Closure Activities**

OxyChem will notify TCEQ in writing of closure activities at least 45 days prior to the date on which the facility expects final closure to commence. Such notification will be sent to both the TCEQ Central Office and the appropriate TCEQ District Office. OxyChem will also notify TCEQ in writing at least 10 days before beginning field activities or sampling to afford TCEQ personnel the opportunity to observe closure activities and/or split samples.

## 5.0 Closure Certification

Once closure of Tank C-720A is complete, the unit will be inspected by OxyChem and an independent P.E. licensed in the State of Texas. Within 60 days of completing closure of the unit, OxyChem will submit to the Executive Director of the TCEQ (by registered mail) a certification from this independent P.E. that the unit was closed in accordance with the specifications contained in the approved Closure Plan. In addition, this certification, signed by both a facility representative and an independent P.E., will include documentation supporting the P.E.'s certification.

The closure certification report will include:

- A summary of closure activities performed;
- Locations of where verification, concrete (if collected), and soil samples were taken; and
- Results of analyses for all of the verification samples, concrete samples (if collected), and soil samples.

Drawings included in the report will identify sample locations and depths with identification numbers that are cross-referenced to sample results. In addition, the report will include the results of visual inspections performed both during and after closure.

## **6.0 Permit Modification**

If a change in the approved closure plan is required, OxyChem will submit a permit modification to the TCEQ requesting authorization of a change in the plan. Such a modification will occur, at a minimum, under the following circumstances:

- Changes in operating plans or facility design that affect the closure plan;
- There is a change in the expected year of closure; and/or
- During closure activities, unexpected events require modification of the approved closure plan.

In addition, if the Executive Director requests modifications to the Closure Plan, OxyChem will submit these modifications within 60 days of the Executive Director's request or within 30 days if changes occur during the closure.

## **7.0 Closure Schedule**

A closure schedule for the unit is provided in Table 2. This table also indicates the estimated number of days required to complete each step of the closure task. The total number of days anticipated to close Tank C-720A following notification to the TCEQ is 112 days.

This schedule does not account for delays that may be caused by force majeure, including without limitations, fires, floods, riots, or strikes. If any of the aforementioned circumstances occur, OxyChem will submit a written request to the Executive Director of the TCEQ to extend the time allowed for closure.

## 8.0 Closure Cost Estimate

Estimated closure costs for Tank C-720A are summarized in Table 3 and supporting information for the estimates is provided in Appendix A. The estimated costs for closure of the tank were updated with a July 2020 permit modification and subsequently reviewed and approved by TCEQ. Estimates were developed in accordance with the requirements set forth in 40 CFR 264.142 and TCEQ recommendations contained in the Industrial Solid Waste Technical Guideline No. 10 (12/7/2017). As such, this estimate reflects "worst case" conditions at the time of closure. The Table 3 cost estimates are based on the 2019 values that have been updated using the inflation factors for 2020 to 2024 ( $1.012 \times 1.042 \times 1.070 \times 1.036 \times 1.024 = 1.197$ ), which results in a multiplier of 1.197.

Activities reflected in this estimate may differ somewhat from the activities that would be conducted by a closure led by OxyChem. In addition, this cost estimate is based on the fact that these facilities are constructed on a concrete slab and that the facility has had no record of a release to the environment. The following summarizes the basis of the closure cost estimates:

- Closure will commence at a point in the facility's operating life when closure is the most expensive;
- Closure is based on abandonment of the site at full capacity;
- Closure activities are performed by a third party;
- The units are at capacity at the time of closure;
- Containment will prevent entry of rainwater into the closure area during stormwater events;
- The hazardous waste units and concrete will be cleaned using high pressure/steam cleaning;
- For each sampling event, one sample will be collected from each hazardous waste unit and the rinsewater;

- It is assumed that the units will be triple rinsed and then samples collected and analyzed;
- It is assumed that two concrete and two soil samples will be collected and analyzed to determine potential contamination of concrete and soil;
- Liquid waste and washwaters will be disposed offsite; and
- Solid and sludge wastes will be shipped offsite for disposal at an authorized TSD facility.

## **Tables**



**Table 1 Sample Analysis Methods**

| <b>Unit</b> | <b>Parameters</b>     | <b>EPA Analytical Methods</b> |
|-------------|-----------------------|-------------------------------|
| Tank C-720A | Volatile organics     | SW-846 8260                   |
| Tank C-720A | Semivolatile organics | SW-846 8270                   |

**Table 2 Closure Schedule**

| <b>Activity</b>                                                   | <b>Schedule (days)</b> |
|-------------------------------------------------------------------|------------------------|
| Notify TCEQ of closure                                            | 45 (prior to start)    |
| <b>Closure activities begin – after prior 45 day notification</b> |                        |
| Remove wastes                                                     | 3                      |
| Decontaminate unit and concrete                                   | 4                      |
| Collect rinsate, concrete (if collected), and soil samples        | 2                      |
| Analyze rinsate, concrete (if collected), and soil samples        | 21                     |
| Re-rinse, resample, and reanalyze, if necessary                   | 22                     |
| Prepare certification of closure report                           | 60                     |
| Total number of days for closure                                  | 112                    |

**Table 3 Closure Cost Estimate for Tank C-720A**

| <b>Task</b>                                  | <b>Cost</b> |
|----------------------------------------------|-------------|
| Removal and Disposal of Waste                | \$941,800   |
| Decontamination of Tank and Rinsate Disposal | \$94,360    |
| Equipment Decontamination                    | \$1,197     |
| Verification Sampling                        | \$1,197     |
| Engineering Inspection/Supervision           | \$5,746     |
| Subtotal:                                    | \$1,044,300 |
| 10% Contingency:                             | \$104,430   |
| Total Unit Closure Cost (2024 Dollars):      | \$1,148,730 |

## **Appendix A**

### **Supporting Information for Closure Cost Estimates**

### Closure Cost Estimate for Tank C-720A

| Activity                                                                               | Cost      |
|----------------------------------------------------------------------------------------|-----------|
| <b>Waste Removal and Disposal of Contents</b>                                          |           |
| 18 hours of labor @ \$100/hr (Removal rate of 60 gpm)                                  | \$1,800   |
| 759,000 pounds (65,000 gallons) of waste @ \$1/lb disposal                             | \$759,000 |
| 13 trips @ \$2,000/trip                                                                | \$26,000  |
| Subtotal                                                                               | \$786,800 |
| <b>Decontaminate Tank with Solvent Flush Then Water Flush and Disposal of Rinsates</b> |           |
| 10 hours of labor @ \$100/hr                                                           | \$1,000   |
| 3,250 gallons of solvent @ \$5/gallon                                                  | \$16,250  |
| 27,110 pounds spent solvent @ \$1/lb                                                   | \$27,110  |
| 81,330 lbs washwater @ \$0.35/lb                                                       | \$28,470  |
| 3 trips @ \$2,000/trip                                                                 | \$6,000   |
| Subtotal                                                                               | \$78,830  |
| <b>Decontaminate Equipment</b>                                                         |           |
| 10 hours of labor @ \$100/hr                                                           | \$1,000   |
| Subtotal                                                                               | \$1,000   |
| <b>Laboratory Analysis</b>                                                             |           |
| 2 samples @ \$500/sample                                                               | \$1,000   |
| Subtotal                                                                               | \$1,000   |
| <b>Engineer's Inspection and Certification</b>                                         |           |
| 24 hours of labor @ \$200/hr                                                           | \$4,800   |
| Subtotal                                                                               | \$4,800   |
| <b>Subtotal</b>                                                                        | \$872,430 |
| 10% Contingency                                                                        | \$87,243  |
| <b>TOTAL</b>                                                                           | \$959,673 |

NOTE: All costs are in 2019 dollars

## **Attachment VII.A.3**

### **Tank C-720B**

### **Closure Plan and Cost Estimate**

**OxyChem**  
**Ingleside, Texas**

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## 1.0 Introduction

OxyChem operates a chemical production facility in Ingleside, Texas. In conjunction with these activities, a variety of hazardous waste streams are generated at the facility. In support of hazardous waste management, Tank C-720B is a permitted tank used to store hazardous waste for greater than 90 days. As such, it is subject to RCRA Part B permitting requirements for closure, which are addressed in this Closure Plan.

This Closure Plan has been prepared to address the following regulatory requirements:

- Closure requirements - 40 CFR Part 264, Subpart G;
- Closure requirements for tanks - 40 CFR 264.197;
- Closure and Remediation - 30 TAC 335.8; and
- Texas Risk Reduction Program (TRRP) - 30 TAC Chapter 350.

The Tank C-720B Report, which contains design drawings of the unit, is provided as Attachment V.C.2 of this application. Other information (e.g., operational, compliance, etc.) regarding the tank is also provided in the unit report (Attachment V.C.2). Under procedures detailed herein, OxyChem will close Tank C-720B in a manner that:

- Minimizes the need for further maintenance;
- Controls, minimizes, or eliminates post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground, surface waters or atmosphere (to the extent necessary to protect human health and the environment);
- Hazardous waste and hazardous waste residues will be removed from the unit; and
- Complies with the above regulatory requirements for closure.

A description of Tank C-720B is contained in Section 2.0, and as mentioned above, detailed descriptions of tank design and operation are provided in other attachments. Closure procedures for the unit are described in Section 3.0 with specific steps necessary to perform the closure found in Section 3.3. Sections 7.0 and 8.0 reflect the closure schedule as well as closure cost estimate.

## 2.0 Unit and Waste Descriptions

As described, OxyChem operates Tank C-720B, which is subject to permitting standards. The tank is used to manage waste streams, which are classified as RCRA hazardous. Tank C-720B is an elevated, spherical tank with a nominal capacity of 65,000 gallons. The tank collects and stores hazardous wastes generated from both onsite and offsite sources prior to subsequent treatment in one of two onsite Halogen Acid Furnaces (CCIN-1 and CCIN-2) . Tank C-720B handles the following wastes:

- Waste oil;
- VCM heavy ends;
- VCM light ends;
- Mother liquor; and
- EDC heavy ends.

Based on expected waste characterization information for these waste streams, primary constituents are those reflected in Table 1.



### **3.0 Closure Plan**

Activities specified in this section are for closure of Tank C-720B. Activities necessary for final facility closure per the requirements of 40 CFR 264.112(b) are specified in the Facility Closure Plan (Attachment VII.A of this application).

#### **3.1 Closure Scenario**

It is expected that closure activities described in this plan will be performed by OxyChem personnel and/or contractors selected by the facility. However, closure costs reflected in this plan are based on the "worst-case" closure requirements of 40 CFR 264.142 and TCEQ recommendations contained in the Industrial Solid Waste Technical Guideline No. 10 (12/7/2017). As such, closure costs are based upon closure of the facility by a third-party at the point in time in the facility's active life when the extent and manner of its operation would make closure most expensive.

#### **3.2 Oversight by a Professional Engineer**

Closure activities will be supervised by OxyChem personnel as well as an independent professional engineer (P.E.) licensed in the State of Texas. Following completion of closure, the P.E. will prepare a closure certification report in accordance with the criteria specified in Section 5.

Tank C-720B will be located within a secondary containment vault/external liner. The P.E. certifying closure will visually inspect the unit and associated concrete vault/liner and surrounding areas prior to beginning closure activities to determine candidate sampling locations for soils. Items to be noted during the visual inspection include, but are not limited to the following:

- Indication of leaks;
- Significant stained areas;
- Condition of seams and expansion joints;
- Cracks in the concrete in the vicinity of the unit; and
- Location of drain piping and/or sumps.

Based on the visual inspection, the P.E. will determine locations for collection of soil samples. If, during inspection of the concrete surfaces, areas with significant damage (e.g.,

separated concrete, extensive concrete patching, etc.) are observed, the P.E. will collect concrete samples (in addition to soil) from these locations. The P.E. will review closure activities and certify that closure was completed according to the approved closure plan.

### **3.3 Closure Procedures**

OxyChem intends to "clean close" Tank C-720B in accordance with all relevant closure requirements. The approach for closure will consist of removal and/or decontamination of waste and waste residues, contaminated containment system components, contaminated soils (if any), and structures and equipment contaminated with wastes. At this time, OxyChem does not anticipate beginning closure of these units until after the year 2040. Further details regarding proposed closure procedures are described in the following sections.

The procedures for closure of Tank C-720B will include the following steps.

- Step 1 - Removal of waste and waste residues (including disposal of rinsate);
- Step 2 - Collection of verification samples;
- Step 3 - Collection of concrete (if required) and soil samples;
- Step 4 - Equipment decontamination; and
- Step 5 - Demonstration that TRRP requirements have been met (if a release has occurred).

#### **Step 1 - Removal of Waste and Waste Residues**

As part of the closure activities for the tank, waste or waste residues that may be present will be removed from the following components:

- Tank interior;
- Piping and ancillary equipment; and
- Concrete surfaces of the secondary containment system/secondary containment shell.

Removal of waste residues that may be present will first be accomplished by pumping remaining waste that may be present in the unit, piping, and ancillary equipment into

containers for subsequent management at an authorized facility. Waste stream piping will then be purged back to its source and disconnected from the tank.

After these initial activities, the tank will be taken out of service for further decontamination, which will consist of removal of waste residues (e.g., removal of any sludge in the tank) and decontamination of tank interior surfaces through rinsing and/or abrasive removal (e.g., scraping, blasting, pressure rinsing, etc.). Any sludge present in the tank will be removed, placed in containers, and disposed of at an authorized facility.

Decontamination will be performed using water rinsing and/or abrasive removal. Water rinsing would consist of a high-pressure wash or other appropriate method such as, but not limited to, detergent wash and/or chemical wash. Surfaces (e.g., piping interior, tank interior, and concrete slab) will be decontaminated by rinsing each surface three times (i.e., triple rinsing). Rinsewater will be potable, service, and/or deionized water. Piping and ancillary equipment will be decontaminated by rinsing with a minimum of three piping volumes of rinsewater through the piping system with rinsewater being collected in containers (e.g., tank trucks, frac tanks, drums, etc.) and properly disposed of depending on its waste classification and LDR status.

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## **Step 2 - Collection of Verification Samples**

After visible signs of contamination are removed as described in Step 1, OxyChem will collect verification samples to demonstrate that removal of all waste residues has occurred and decontamination has been achieved. If water rinsing is used to achieve decontamination, verification samples will be collected from the final rinsate. If abrasive removal is used to achieve decontamination, verification samples will be collected from either the final batch of blast material or from wipe samples of the decontaminated surfaces. One verification sample will be collected from each activity (i.e., one from decontamination of piping, one from decontamination of tank interior, and one from decontamination of concrete surface).

Verification samples will be analyzed for the hazardous constituents identified in Table 1, which have been selected as representative of constituents in wastes managed in the tank. Analytical results from verification samples will first be assessed to determine if any constituents are detected. If no constituents are detected in the samples, the unit will be considered decontaminated. If constituents are detected, their levels will be compared to the Tier 1 protective concentration levels (PCLs) for residential land use specified in TRRP. If levels are below Tier 1 residential PCLs, the unit will be considered decontaminated. If analytical results do not reflect that the unit has been decontaminated, Steps 1 and 2 may be repeated until specified cleanup criteria are met.

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includes preparation of all applicable reports and demonstration that the remedy standard has been met. If a release has occurred, the objective will be to meet Remedy Standard A criteria to achieve clean closure. In the event that Remedy Standard A criteria cannot be met and Remedy Standard B is performed, OxyChem will obtain all required TRRP and RCRA approvals/authorizations.

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This schedule does not account for delays that may be caused by force majeure, including without limitations, fires, floods, riots, or strikes. If any of the aforementioned circumstances occur, OxyChem will submit a written request to the Executive Director of the TCEQ to extend the time allowed for closure.

## 8.0 Closure Cost Estimate

Estimated closure costs for Tank C-720B are summarized in Table 3 and supporting information for the estimates is provided in Appendix A. The estimated costs for closure of the tank were updated with a July 2020 permit modification and subsequently reviewed and approved by TCEQ. Estimates were developed in accordance with the requirements set forth in 40 CFR 264.142 and TCEQ recommendations contained in the Industrial Solid Waste Technical Guideline No. 10 (12/7/2017). As such, this estimate reflects "worst case" conditions at the time of closure. The Table 3 cost estimates are based on the 2019 values that have been updated using the inflation factors for 2020 to 2024 ( $1.012 \times 1.042 \times 1.070 \times 1.036 \times 1.024 = 1.197$ ), which results in a multiplier of 1.197.

Activities reflected in this estimate may differ somewhat from the activities that would be conducted by a closure led by OxyChem. In addition, this cost estimate is based on the fact that these facilities are constructed on a concrete slab and that the facility has had no record of a release to the environment. The following summarizes the basis of the closure cost estimates:

- Closure will commence at a point in the facility's operating life when closure is the most expensive;
- Closure is based on abandonment of the site at full capacity;
- Closure activities are performed by a third party;
- The units are at capacity at the time of closure;
- Containment will prevent entry of rainwater into the closure area during stormwater events;
- The hazardous waste units and concrete will be cleaned using high pressure/steam cleaning;
- For each sampling event, one sample will be collected from each hazardous waste unit and the rinsewater;

- It is assumed that the units will be triple rinsed and then samples collected and analyzed;
- It is assumed that two concrete and two soil samples will be collected and analyzed to determine potential contamination of concrete and soil;
- Liquid waste and washwaters will be disposed offsite; and
- Solid and sludge wastes will be shipped offsite for disposal at an authorized TSD facility.

## **Tables**

**Table 1 Sample Analysis Methods**

| Unit        | Parameters            | EPA Analytical Methods |
|-------------|-----------------------|------------------------|
| Tank C-720B | Volatile organics     | SW-846 8260            |
| Tank C-720B | Semivolatile organics | SW-846 8270            |

**Table 2 Closure Schedule**

| Activity                                                          | Schedule (days)     |
|-------------------------------------------------------------------|---------------------|
| Notify TCEQ of closure                                            | 45 (prior to start) |
| <b>Closure activities begin – after prior 45 day notification</b> |                     |
| Remove wastes                                                     | 3                   |
| Decontaminate unit and concrete                                   | 4                   |
| Collect rinsate, concrete (if collected), and soil samples        | 2                   |
| Analyze rinsate, concrete (if collected), and soil samples        | 21                  |
| Re-rinse, resample, and reanalyze, if necessary                   | 22                  |
| Prepare certification of closure report                           | 60                  |
| Total number of days for closure                                  | 112                 |

**Table 3 Closure Cost Estimate for Tank C-720B**

| Task                                         | Cost        |
|----------------------------------------------|-------------|
| Removal and Disposal of Waste                | \$941,800   |
| Decontamination of Tank and Rinsate Disposal | \$94,360    |
| Equipment Decontamination                    | \$1,197     |
| Verification Sampling                        | \$1,197     |
| Engineering Inspection/Supervision           | \$5,746     |
| Subtotal:                                    | \$1,044,300 |
| 10% Contingency:                             | \$104,430   |
| Total Unit Closure Cost (2024 Dollars):      | \$1,148,730 |



## **Appendix A**

### **Supporting Information for Closure Cost Estimates**

### Closure Cost Estimate for Tank C-720B

| Activity                                                                               | Cost      |
|----------------------------------------------------------------------------------------|-----------|
| <b>Waste Removal and Disposal of Contents</b>                                          |           |
| 18 hours of labor @ \$100/hr (Removal rate of 60 gpm)                                  | \$1,800   |
| 759,000 pounds (65,000 gallons) of waste @ \$1/lb disposal                             | \$759,000 |
| 13 trips @ \$2,000/trip                                                                | \$26,000  |
| Subtotal                                                                               | \$786,800 |
| <b>Decontaminate Tank with Solvent Flush Then Water Flush and Disposal of Rinsates</b> |           |
| 10 hours of labor @ \$100/hr                                                           | \$1,000   |
| 3,250 gallons of solvent @ \$5/gallon                                                  | \$16,250  |
| 27,110 pounds spent solvent @ \$1/lb                                                   | \$27,110  |
| 81,330 lbs washwater @ \$0.35/lb                                                       | \$28,470  |
| 3 trips @ \$2,000/trip                                                                 | \$6,000   |
| Subtotal                                                                               | \$78,830  |
| <b>Decontaminate Equipment</b>                                                         |           |
| 10 hours of labor @ \$100/hr                                                           | \$1,000   |
| Subtotal                                                                               | \$1,000   |
| <b>Laboratory Analysis</b>                                                             |           |
| 2 samples @ \$500/sample                                                               | \$1,000   |
| Subtotal                                                                               | \$1,000   |
| <b>Engineer's Inspection and Certification</b>                                         |           |
| 24 hours of labor @ \$200/hr                                                           | \$4,800   |
| Subtotal                                                                               | \$4,800   |
| <b>Subtotal</b>                                                                        | \$872,430 |
| 10% Contingency                                                                        | \$87,243  |
| <b>TOTAL</b>                                                                           | \$959,673 |

NOTE: All costs are in 2019 dollars

**Attachment VII.A.4**

**Halogen Acid Furnace CCIN-1**

**Closure Plan and Cost Estimate**

**OxyChem**  
**Ingleside, Texas**

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## 1.0 Introduction

OxyChem operates a chemical production facility in Ingleside, Texas. In conjunction with these activities, a variety of hazardous waste streams are generated at the facility. In support of hazardous waste management, CCIN-1 is a permitted halogen acid furnace (HAF) used to treat hazardous waste via combustion. As such, it is subject to RCRA Part B permitting requirements for closure, which are addressed in this Closure Plan.

This Closure Plan has been prepared to address the following regulatory requirements:

- Closure requirements for BIF units – 40 CFR 266.102(a)(2)(vii);
- Closure requirements - 40 CFR Part 264, Subpart G (264.111 – 264.115);
- Closure and Remediation - 30 TAC 335.8; and
- Texas Risk Reduction Program (TRRP) - 30 TAC Chapter 350.

The HAF CCIN-1 Report, which contains design drawings of the unit, is provided as Attachment V.I.1 of this application. Other information (e.g., operational, compliance, etc.) regarding the furnace is also provided in the unit report (Attachment V.I.1). Under procedures detailed herein, OxyChem will close HAF CCIN-1 in a manner that:

- Minimizes the need for further maintenance;
- Controls, minimizes, or eliminates post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground, surface waters or atmosphere (to the extent necessary to protect human health and the environment);
- Hazardous waste and hazardous waste residues will be removed from the unit; and
- Complies with the above regulatory requirements for closure.

A description of HAF CCIN-1 is contained in Section 2.0, and as mentioned above, detailed descriptions regarding design and operation are provided in other attachments. Closure procedures for the unit are described in Section 3.0 with specific steps necessary to perform the closure found in Section 3.3. Sections 7.0 and 8.0 reflect the closure schedule as well as closure cost estimate.

## 2.0 Unit and Waste Descriptions

As described, OxyChem operates HAF CCIN-1, which is subject to permitting standards. The unit is used to treat waste streams, which are classified as RCRA hazardous. HAF CCIN-1 is a 34 million Btu/hr unit with a maximum operating temperature of 2,400 °F. The unit receives and combusts the following wastes:

- Waste oil;
- VCM heavy ends;
- VCM light ends;
- Mother liquor; and
- EDC heavy ends.

Based on expected waste characterization information for these waste streams, primary constituents are those reflected in Table 1.

### **3.0 Closure Plan**

Activities specified in this section are for closure of HAF CCIN-1. Activities necessary for final facility closure per the requirements of 40 CFR 264.112(b) are specified in the Facility Closure Plan (Attachment VII.A of this application).

#### **3.1 Closure Scenario**

It is expected that closure activities described in this plan will be performed by OxyChem personnel and/or contractors selected by the facility. However, closure costs reflected in this plan are based on the "worst-case" closure requirements of 40 CFR 264.142 and TCEQ recommendations contained in the Industrial Solid Waste Technical Guideline No. 10 (12/7/2017). As such, closure costs are based upon closure of the facility by a third-party at the point in time in the facility's active life when the extent and manner of its operation would make closure most expensive.

#### **3.2 Oversight by a Professional Engineer**

Closure activities will be supervised by OxyChem personnel as well as an independent professional engineer (P.E.) licensed in the State of Texas. Following completion of closure, the P.E. will prepare a closure certification report in accordance with the criteria specified in Section 5.

The unit is situated over a concrete foundation area. The P.E. certifying closure will visually inspect the unit and associated concrete foundation and surrounding areas prior to beginning closure activities to determine candidate sampling locations for soils. Items to be noted during the visual inspection include, but are not limited to the following:

- Indication of leaks;
- Significant stained areas;
- Condition of seams and expansion joints;
- Cracks in the concrete in the vicinity of the unit; and
- Location of drain piping and/or sumps.

Based on the visual inspection, the P.E. will determine locations for collection of soil samples. If, during inspection of the concrete surfaces, areas with significant damage (e.g., separated concrete, extensive concrete patching, etc.) are observed, the P.E. will collect

concrete samples (in addition to soil) from these locations. The P.E. will review closure activities and certify that closure was completed according to the approved closure plan.

### **3.3 Closure Procedures**

OxyChem intends to "clean close" HAF CCIN-1 in accordance with all relevant closure requirements. The approach for closure will consist of removal and/or decontamination of waste and waste residues, contaminated containment system components, contaminated soils (if any), and structures and equipment contaminated with wastes. At this time, OxyChem does not anticipate beginning closure of these units until after the year 2040. Further details regarding proposed closure procedures are described in the following sections.

The procedures for closure of HAF CCIN-1 will include the following steps.

- Step 1 - Removal of waste and waste residues (including disposal of rinsate);
- Step 2 - Collection of verification samples;
- Step 3 - Collection of concrete (if required) and soil samples;
- Step 4 - Equipment decontamination; and
- Step 5 - Demonstration that TRRP requirements have been met (if a release has occurred).

#### **Step 1 - Removal of Waste and Waste Residues**

As part of the closure activities for the unit, waste or waste residues that may be present will be removed from the following components:

- Furnace interior;
- Piping and ancillary equipment; and
- Concrete surfaces of the secondary containment system/secondary containment shell.

Removal of waste residues that may be present will first be accomplished by a "burnout" period whereby all remaining waste in lines is fed to the furnace, and the unit is then fed solely with combustion gas (i.e., no hazardous waste feed) for a period of three hours. After the



initial burnout activities, the furnace will be taken out of service for further decontamination, which will consist of removal of waste residues (e.g., removal of ash) and decontamination of interior surfaces through rinsing and/or abrasive removal (e.g., scraping, blasting, pressure rinsing, etc.). Ash/residue present in the furnace will be removed, placed in containers, and disposed of at an authorized facility.

Decontamination will be performed using water rinsing and/or abrasive removal. Water rinsing would consist of a high-pressure wash or other appropriate method such as, but not limited to, detergent wash and/or chemical wash. Surfaces (e.g., piping interior, furnace interior, and concrete slab) will be decontaminated by rinsing each surface three times (i.e., triple rinsing). Rinsewater will be potable, service, and/or deionized water. Piping and ancillary equipment will be decontaminated by rinsing with a minimum of three piping volumes of rinsewater through the piping system with rinsewater being collected in containers (e.g., tank trucks, frac tanks, drums, etc.) and properly disposed of depending on its waste classification and LDR status.

In lieu of water rinsing, surfaces (e.g., piping interior, furnace interior, concrete surface) may be decontaminated using abrasive removal. Abrasive removal would consist of using a blasting media (e.g., sand, plastic bead, slag, etc.) and/or physical removal (e.g., scraping, sanding, etc.). Decontamination will be accomplished when visible residue has been removed. Waste blast material (i.e., blasting media and/or removed residue) will be collected in containers (e.g., drums, roll-offs, etc.) and properly disposed of depending on its waste classification and LDR status. Multiple events may be performed to achieve visual decontamination.

## **Step 2 - Collection of Verification Samples**

After visible signs of contamination are removed as described in Step 1, OxyChem will collect verification samples to demonstrate that removal of all waste residues has occurred and decontamination has been achieved. If water rinsing is used to achieve decontamination, verification samples will be collected from the final rinsate. If abrasive removal is used to achieve decontamination, verification samples will be collected from either the final batch of blast material or from wipe samples of the decontaminated surfaces. One verification sample will be collected from each activity (i.e., one from decontamination of piping, one from decontamination of furnace interior, and one from decontamination of concrete surface).

Verification samples will be analyzed for the hazardous constituents identified in Table 1, which have been selected as representative of constituents in wastes managed in the furnace.

Analytical results from verification samples will first be assessed to determine if any constituents are detected. If no constituents are detected in the samples, the unit will be considered decontaminated. If constituents are detected, their levels will be compared to the Tier 1 protective concentration levels (PCLs) for residential land use specified in TRRP. If levels are below Tier 1 residential PCLs, the unit will be considered decontaminated. If analytical results do not reflect that the unit has been decontaminated, Steps 1 and 2 may be repeated until specified cleanup criteria are met.

As an alternate to decontamination, OxyChem may elect, based on sample results, to remove and dispose of contaminated structures to achieve closure. Should OxyChem elect to achieve closure through removal and disposal, all relevant RCRA management procedures (e.g., waste classification, manifesting, LDR requirements, etc.) will be met.

### **Step 3 - Collection of Concrete and Soil Samples**

To verify that a release has not occurred from the unit, soil samples will be collected. Further, if the P.E. determines that concrete samples should be collected, they will be obtained per the procedures reflected below. The following procedures will be used for collection of samples from each material.

#### **Concrete Samples**

If concrete samples are collected from the concrete slab associated with the furnace, the decision to collect them will be made by the supervising P.E. based on the visible inspection of concrete. As reflected in Section 3.2, the P.E. will be looking for areas that exhibit signs of significant damage.

Concrete samples would be analyzed for the presence of the hazardous constituents listed in Table 1. If no constituents are detected in the concrete sample(s), the concrete will be considered clean. If constituents are detected, measured values will be compared with waste classification and TRRP levels to determine disposition of the concrete.

In the event analysis of concrete samples indicates that the concentration of constituents do not meet the criteria for clean closure (i.e., Tier 1 residential PCLs), OxyChem may also determine if the delineated sampling areas were representative of the entire concrete pad or if

additional samples will be required to obtain a defined characterization of the extent of contamination.

### **Soil Samples**

To determine if soil has been contaminated with hazardous wastes or hazardous constituents, soil samples will be collected in the vicinity of the unit. At least two soil samples will be obtained from soils under or in close proximity to (i.e., near the edge of) the concrete. The decision to collect more than two soil samples will be made by the supervising P.E. based on the visible inspection of the concrete. As reflected in Section 3.2, the P.E. will be looking for areas that exhibit signs of contamination, staining, or deterioration.

Soil samples will be analyzed for the presence of hazardous constituents listed in Table 1. If no constituents are detected in the soil sample(s), a determination will be made that no release has occurred from the unit. If constituents are detected, measured values will be assessed in accordance with TRRP to determine appropriate action. If levels are below Tier 1 residential PCLs, a determination will be made that no releases to soil have occurred.

In the event analysis of soil samples indicates that the concentration of constituents do not meet the criteria for clean closure (i.e., are above Tier 1 residential PCLs), OxyChem or the P.E. may also determine if the delineated sampling areas were representative of the entire area or if additional samples will be required to obtain a defined characterization of the extent of contamination.

### **Step 4 - Equipment Decontamination**

Non-disposable equipment used during closure that comes in contact with the waste material will be decontaminated using water and non-ionic soap followed by a potable, service, and/or deionized water rinse. Disposable equipment will be disposed of at an authorized facility.

Equipment or system component that cannot be cleaned may also be disposed of at an authorized facility. Washwater will be directed to a sump or a temporary collection point (e.g., vacuum truck) and transferred to an authorized facility.

Non-disposable sampling equipment will be cleaned prior to collection of any samples and after the collection of each sample using a detergent and deionized or distilled water wash followed by a deionized or distilled water rinse.

## **Step 5 - TRRP Demonstration**

If, through analysis of soil samples, it is determined that a release from the unit has occurred to underlying soils, then a demonstration of compliance with TRRP will be performed. This includes preparation of all applicable reports and demonstration that the remedy standard has been met. If a release has occurred, the objective will be to meet Remedy Standard A criteria to achieve clean closure. In the event that Remedy Standard A criteria cannot be met and Remedy Standard B is performed, OxyChem will obtain all required TRRP and RCRA approvals/authorizations.

## **4.0 Notification of Closure Activities**

OxyChem will notify TCEQ in writing of closure activities at least 45 days prior to the date on which the facility expects partial or final closure to commence. Such notification will be sent to both the TCEQ Central Office and the appropriate TCEQ District Office. OxyChem will also notify TCEQ in writing at least 10 days before beginning field activities or sampling to afford TCEQ personnel the opportunity to observe closure activities and/or split samples.

## 5.0 Closure Certification

Once closure of HAF CCIN-1 is complete, the unit will be inspected by OxyChem and an independent P.E. licensed in the State of Texas. Within 60 days of completing closure of the unit, OxyChem will submit to the Executive Director of the TCEQ (by registered mail) a certification from this independent P.E. that the unit was closed in accordance with the specifications contained in the approved Closure Plan. In addition, this certification, signed by both a facility representative and an independent P.E., will include documentation supporting the P.E.'s certification.

The closure certification report will include:

- A summary of closure activities performed;
- Locations of where verification, concrete (if collected), and soil samples were taken; and
- Results of analyses for all of the verification samples, concrete samples (if collected), and soil samples.

Drawings included in the report will identify sample locations and depths with identification numbers that are cross-referenced to sample results. In addition, the report will include the results of visual inspections performed both during and after closure.

## **6.0 Permit Modification**

If a change in the approved closure plan is required, OxyChem will submit a permit modification to the TCEQ requesting authorization of a change in the plan. Such a modification will occur, at a minimum, under the following circumstances:

- Changes in operating plans or facility design that affect the closure plan;
- There is a change in the expected year of closure; and/or
- During closure activities, unexpected events require modification of the approved closure plan.

In addition, if the Executive Director requests modifications to the Closure Plan, OxyChem will submit these modifications within 60 days of the Executive Director's request or within 30 days if changes occur during the closure.

## **7.0 Closure Schedule**

A closure schedule for the unit is provided in Table 2. This table also indicates the estimated number of days required to complete each step of the closure task. The total number of days anticipated to close HAF CCIN-1 following notification to the TCEQ is 82 days.

This schedule does not account for delays that may be caused by force majeure, including without limitations, fires, floods, riots, or strikes. If any of the aforementioned circumstances occur, OxyChem will submit a written request to the Executive Director of the TCEQ to extend the time allowed for closure.



## 8.0 Closure Cost Estimate

Estimated closure costs for HAF CCIN-1 are summarized in Table 3 and supporting information for the estimates is provided in Appendix A. The estimated costs for closure of the furnace were updated with a July 2020 permit modification and subsequently reviewed and approved by TCEQ. Estimates were developed in accordance with the requirements set forth in 40 CFR 264.142 and TCEQ recommendations contained in the Industrial Solid Waste Technical Guideline No. 10 (12/7/2017). As such, this estimate reflects "worst case" conditions at the time of closure. The Table 3 cost estimates are based on the 2019 values that have been updated using the inflation factors for 2020 to 2024 ( $1.012 \times 1.042 \times 1.070 \times 1.036 \times 1.024 = 1.197$ ), which results in a multiplier of 1.197.

Activities reflected in this estimate may differ somewhat from the activities that would be conducted by a closure led by OxyChem. In addition, this cost estimate is based on the fact that these facilities are constructed on a concrete slab and that the facility has had no record of a release to the environment. The following summarizes the basis of the closure cost estimates:

- Closure will commence at a point in the facility's operating life when closure is the most expensive;
- Closure is based on abandonment of the site at full capacity;
- Closure activities are performed by a third party;
- The units are at capacity at the time of closure;
- Containment will prevent entry of rainwater into the closure area during stormwater events;
- The hazardous waste units and concrete will be cleaned using high pressure/steam cleaning;
- For each sampling event, one sample will be collected from each hazardous waste unit and the rinsewater;

- It is assumed that the units will be triple rinsed and then samples collected and analyzed;
- It is assumed that two concrete and two soil samples will be collected and analyzed to determine potential contamination of concrete and soil;
- Liquid waste and washwaters will be disposed offsite; and
- Solid and sludge wastes will be shipped offsite for disposal at an authorized TSD facility.

## **Tables**

**Table 1 Sample Analysis Methods**

| Unit       | Parameters        | EPA Analytical Methods |
|------------|-------------------|------------------------|
| HAF CCIN-1 | Volatile organics | SW-846, 8260           |

**Table 2 Closure Schedule**

| Activity                                                          | Schedule (days)     |
|-------------------------------------------------------------------|---------------------|
| Notify TCEQ of closure                                            | 45 (prior to start) |
| <b>Closure activities begin – after prior 45 day notification</b> |                     |
| Remove wastes                                                     | 3                   |
| Decontaminate unit and concrete                                   | 4                   |
| Collect rinsate, concrete (if collected), and soil samples        | 2                   |
| Analyze rinsate, concrete (if collected), and soil samples        | 21                  |
| Re-rinse, resample, and reanalyze, if necessary                   | 22                  |
| Prepare certification of closure report                           | 30                  |
| Total number of days for closure                                  | 82                  |

**Table 3 Closure Cost Estimate for HAF CCIN-1**

| Task                                       | Cost      |
|--------------------------------------------|-----------|
| Rinsing and disposal of rinsate            | \$85,466  |
| Combust natural gas                        | \$479     |
| Removal of ash, etc.                       | \$74,166  |
| Decontamination of cleanup equipment       | \$1,197   |
| Sampling and associated laboratory charges | \$1,197   |
| Engineering Inspection/Supervision         | \$5,746   |
| Subtotal                                   | \$168,251 |
| 10% Contingency                            | \$16,825  |
| Total Unit Closure Cost (2024 Dollars)     | \$185,076 |

## **Appendix A**

### **Supporting Information for Closure Cost Estimate**

### Closure Cost Estimate for HAF CCIN-1

| Activity                                                                                 | Cost      |
|------------------------------------------------------------------------------------------|-----------|
| <b>Flush Furnace, Piping, and Pumps with Appropriate Solvent and Dispose of Rinsate</b>  |           |
| 8 hours of labor @ \$50/hr                                                               | \$400     |
| 1,000 gallons solvent @ \$5/gallon                                                       | \$5,000   |
| 35,000 pounds (3,000 gallons) of waste @ \$1/lb disposal                                 | \$35,000  |
| 1,000 gallons spent solvent @ \$5/gallon                                                 | \$5,000   |
| 1 trip @ \$2,000/trip                                                                    | \$26,000  |
| Subtotal                                                                                 | \$71,400  |
| <b>Burn Natural Gas</b>                                                                  |           |
| 4 hours of labor and natural gas @ \$100/hr                                              | \$400     |
| Subtotal                                                                                 | \$400     |
| <b>Remove and Dispose of Ash, Scrubber Water, Absorber Effluents, and Spent Catalyst</b> |           |
| 16 hours of labor @ \$50/hr                                                              | \$800     |
| 4 drums of ash @ \$500/drum                                                              | \$2,000   |
| 21,500 gallons of liquids @ \$2/gallon                                                   | \$43,000  |
| 5.4 tons of catalyst @ \$400/ton                                                         | \$2,160   |
| 7 trips @ \$2,000/trip                                                                   | \$14,000  |
| Subtotal                                                                                 | \$61,960  |
| <b>Decontaminate Equipment</b>                                                           |           |
| 10 hours of labor @ \$100/hr                                                             | \$1,000   |
| Subtotal                                                                                 | \$1,000   |
| <b>Laboratory Analysis</b>                                                               |           |
| 2 samples @ \$500/sample                                                                 | \$1,000   |
| Subtotal                                                                                 | \$1,000   |
| <b>Engineer's Inspection and Certification</b>                                           |           |
| 24 hours of labor @ \$200/hr                                                             | \$4,800   |
| Subtotal                                                                                 | \$4,800   |
| <b>Subtotal</b>                                                                          | \$140,560 |
| 10% Contingency                                                                          | \$14,056  |
| <b>TOTAL</b>                                                                             | \$154,616 |

- Notes: 1. All costs are in 2019 dollars
2. In order to determine the amount of rinsates generated, OxyChem first considered that the flow rate to the unit is ~8 gpm with 250 minutes of flush time for solvent and 500 minutes of flush time for water.

**Attachment VII.A.5**

**Halogen Acid Furnace CCIN-2**

**Closure Plan and Cost Estimate**

**OxyChem**  
**Ingleside, Texas**

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## 1.0 Introduction

OxyChem operates a chemical production facility in Ingleside, Texas. In conjunction with these activities, a variety of hazardous waste streams are generated at the facility. In support of hazardous waste management, CCIN-2 is a permitted halogen acid furnace used to treat hazardous waste via combustion. As such, it is subject to RCRA Part B permitting requirements for closure, which are addressed in this Closure Plan.

This Closure Plan has been prepared to address the following regulatory requirements:

- Closure requirements for BIF units – 40 CFR 266.102(a)(2)(vii);
- Closure requirements - 40 CFR Part 264, Subpart G (264.111 – 264.115);
- Closure and Remediation - 30 TAC 335.8; and
- Texas Risk Reduction Program (TRRP) - 30 TAC Chapter 350.

The HAF CCIN-2 Report, which contains design drawings of the unit, is provided as Attachment V.I.2 of this application. Other information (e.g., operational, compliance, etc.) regarding the furnace is also provided in the unit report (Attachment V.I.2). Under procedures detailed herein, OxyChem will close HAF CCIN-2 in a manner that:

- Minimizes the need for further maintenance;
- Controls, minimizes, or eliminates post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground, surface waters or atmosphere (to the extent necessary to protect human health and the environment);
- Hazardous waste and hazardous waste residues will be removed from the unit; and
- Complies with the above regulatory requirements for closure.

A description of HAF CCIN-2 is contained in Section 2.0, and as mentioned above, detailed descriptions regarding design and operation are provided in other attachments. Closure procedures for the unit are described in Section 3.0 with specific steps necessary to perform the closure found in Section 3.3. Sections 7.0 and 8.0 reflect the closure schedule as well as closure cost estimate.

## 2.0 Unit and Waste Descriptions

As described, OxyChem operates HAF CCIN-2, which is subject to permitting standards. The unit is used to treat waste streams, which are classified as RCRA hazardous. HAF CCIN-2 is a 34 million Btu/hr unit with a maximum operating temperature of 2,400 °F. The unit receives and combusts the following wastes:

- Waste oil;
- VCM heavy ends;
- VCM light ends;
- Mother liquor; and
- EDC heavy ends.

Based on expected waste characterization information for these waste streams, primary constituents are those reflected in Table 1.

### **3.0 Closure Plan**

Activities specified in this section are for closure of HAF CCIN-2. Activities necessary for final facility closure per the requirements of 40 CFR 264.112(b) are specified in the Facility Closure Plan (Attachment VII.A of this application).

#### **3.1 Closure Scenario**

It is expected that closure activities described in this plan will be performed by OxyChem personnel and/or contractors selected by the facility. However, closure costs reflected in this plan are based on the "worst-case" closure requirements of 40 CFR 264.142 and TCEQ recommendations contained in the Industrial Solid Waste Technical Guideline No. 10 (12/7/2017). As such, closure costs are based upon closure of the facility by a third-party at the point in time in the facility's active life when the extent and manner of its operation would make closure most expensive.

#### **3.2 Oversight by a Professional Engineer**

Closure activities will be supervised by OxyChem personnel as well as an independent professional engineer (P.E.) licensed in the State of Texas. Following completion of closure, the P.E. will prepare a closure certification report in accordance with the criteria specified in Section 5.

The unit is situated over a concrete foundation area. The P.E. certifying closure will visually inspect the unit and associated concrete foundation and surrounding areas prior to beginning closure activities to determine candidate sampling locations for soils. Items to be noted during the visual inspection include, but are not limited to the following:

- Indication of leaks;
- Significant stained areas;
- Condition of seams and expansion joints;
- Cracks in the concrete in the vicinity of the unit; and
- Location of drain piping and/or sumps.

Based on the visual inspection, the P.E. will determine locations for collection of soil samples. If, during inspection of the concrete surfaces, areas with significant damage (e.g., separated concrete, extensive concrete patching, etc.) are observed, the P.E. will collect

concrete samples (in addition to soil) from these locations. The P.E. will review closure activities and certify that closure was completed according to the approved closure plan.

### **3.3 Closure Procedures**

OxyChem intends to "clean close" HAF CCIN-2 in accordance with all relevant closure requirements. The approach for closure will consist of removal and/or decontamination of waste and waste residues, contaminated containment system components, contaminated soils (if any), and structures and equipment contaminated with wastes. At this time, OxyChem does not anticipate beginning closure of these units until after the year 2040. Further details regarding proposed closure procedures are described in the following sections.

The procedures for closure of HAF CCIN-2 will include the following steps.

- Step 1 - Removal of waste and waste residues (including disposal of rinsate);
- Step 2 - Collection of verification samples;
- Step 3 - Collection of concrete (if required) and soil samples;
- Step 4 - Equipment decontamination; and
- Step 5 - Demonstration that TRRP requirements have been met (if a release has occurred).

#### **Step 1 - Removal of Waste and Waste Residues**

As part of the closure activities for the unit, waste or waste residues that may be present will be removed from the following components:

- Furnace interior;
- Piping and ancillary equipment; and
- Concrete surfaces of the secondary containment system/secondary containment shell.

Removal of waste residues that may be present will first be accomplished by a "burnout" period whereby all remaining waste in lines is fed to the furnace, and the unit is then fed solely with combustion gas (i.e., no hazardous waste feed) for a period of three hours. After the

initial burnout activities, the furnace will be taken out of service for further decontamination, which will consist of removal of waste residues (e.g., removal of ash) and decontamination of interior surfaces through rinsing and/or abrasive removal (e.g., scraping, blasting, pressure rinsing, etc.). Ash/residue present in the furnace will be removed, placed in containers, and disposed of at an authorized facility.

Decontamination will be performed using water rinsing and/or abrasive removal. Water rinsing would consist of a high-pressure wash or other appropriate method such as, but not limited to, detergent wash and/or chemical wash. Surfaces (e.g., piping interior, furnace interior, and concrete slab) will be decontaminated by rinsing each surface three times (i.e., triple rinsing). Rinsewater will be potable, service, and/or deionized water. Piping and ancillary equipment will be decontaminated by rinsing with a minimum of three piping volumes of rinsewater through the piping system with rinsewater being collected in containers (e.g., tank trucks, frac tanks, drums, etc.) and properly disposed of depending on its waste classification and LDR status.

In lieu of water rinsing, surfaces (e.g., piping interior, furnace interior, concrete surface) may be decontaminated using abrasive removal. Abrasive removal would consist of using a blasting media (e.g., sand, plastic bead, slag, etc.) and/or physical removal (e.g., scraping, sanding, etc.). Decontamination will be accomplished when visible residue has been removed. Waste blast material (i.e., blasting media and/or removed residue) will be collected in containers (e.g., drums, roll-offs, etc.) and properly disposed of depending on its waste classification and LDR status. Multiple events may be performed to achieve visual decontamination.

## **Step 2 - Collection of Verification Samples**

After visible signs of contamination are removed as described in Step 1, OxyChem will collect verification samples to demonstrate that removal of all waste residues has occurred and decontamination has been achieved. If water rinsing is used to achieve decontamination, verification samples will be collected from the final rinsate. If abrasive removal is used to achieve decontamination, verification samples will be collected from either the final batch of blast material or from wipe samples of the decontaminated surfaces. One verification sample will be collected from each activity (i.e., one from decontamination of piping, one from decontamination of furnace interior, and one from decontamination of concrete surface).

Verification samples will be analyzed for the hazardous constituents identified in Table 1, which have been selected as representative of constituents in wastes managed in the furnace.

Analytical results from verification samples will first be assessed to determine if any constituents are detected. If no constituents are detected in the samples, the unit will be considered decontaminated. If constituents are detected, their levels will be compared to the Tier 1 protective concentration levels (PCLs) for residential land use specified in TRRP. If levels are below Tier 1 residential PCLs, the unit will be considered decontaminated. If analytical results do not reflect that the unit has been decontaminated, Steps 1 and 2 may be repeated until specified cleanup criteria are met.

As an alternate to decontamination, OxyChem may elect, based on sample results, to remove and dispose of contaminated structures to achieve closure. Should OxyChem elect to achieve closure through removal and disposal, all relevant RCRA management procedures (e.g., waste classification, manifesting, LDR requirements, etc.) will be met.

### **Step 3 - Collection of Concrete and Soil Samples**

To verify that a release has not occurred from the unit, soil samples will be collected. Further, if the P.E. determines that concrete samples should be collected, they will be obtained per the procedures reflected below. The following procedures will be used for collection of samples from each material.

#### **Concrete Samples**

If concrete samples are collected from the concrete slab associated with the furnace, the decision to collect them will be made by the supervising P.E. based on the visible inspection of concrete. As reflected in Section 3.2, the P.E. will be looking for areas that exhibit signs of significant damage.

Concrete samples would be analyzed for the presence of the hazardous constituents listed in Table 1. If no constituents are detected in the concrete sample(s), the concrete will be considered clean. If constituents are detected, measured values will be compared with waste classification and TRRP levels to determine disposition of the concrete.

In the event analysis of concrete samples indicates that the concentration of constituents do not meet the criteria for clean closure (i.e., Tier 1 residential PCLs), OxyChem may also determine if the delineated sampling areas were representative of the entire concrete pad or if

additional samples will be required to obtain a defined characterization of the extent of contamination.

### **Soil Samples**

To determine if soil has been contaminated with hazardous wastes or hazardous constituents, soil samples will be collected in the vicinity of the unit. At least two soil samples will be obtained from soils under or in close proximity to (i.e., near the edge of) the concrete. The decision to collect more than two soil samples will be made by the supervising P.E. based on the visible inspection of the concrete. As reflected in Section 3.2, the P.E. will be looking for areas that exhibit signs of contamination, staining, or deterioration.

Soil samples will be analyzed for the presence of hazardous constituents listed in Table 1. If no constituents are detected in the soil sample(s), a determination will be made that no release has occurred from the unit. If constituents are detected, measured values will be assessed in accordance with TRRP to determine appropriate action. If levels are below Tier 1 residential PCLs, a determination will be made that no releases to soil have occurred.

In the event analysis of soil samples indicates that the concentration of constituents do not meet the criteria for clean closure (i.e., are above Tier 1 residential PCLs), OxyChem or the P.E. may also determine if the delineated sampling areas were representative of the entire area or if additional samples will be required to obtain a defined characterization of the extent of contamination.

### **Step 4 - Equipment Decontamination**

Non-disposable equipment used during closure that comes in contact with the waste material will be decontaminated using water and non-ionic soap followed by a potable, service, and/or deionized water rinse. Disposable equipment will be disposed of at an authorized facility.

Equipment or system component that cannot be cleaned may also be disposed of at an authorized facility. Washwater will be directed to a sump or a temporary collection point (e.g., vacuum truck) and transferred to an authorized facility.

Non-disposable sampling equipment will be cleaned prior to collection of any samples and after the collection of each sample using a detergent and deionized or distilled water wash followed by a deionized or distilled water rinse.

### **Step 5 - TRRP Demonstration**

If, through analysis of soil samples, it is determined that a release from the unit has occurred to underlying soils, then a demonstration of compliance with TRRP will be performed. This includes preparation of all applicable reports and demonstration that the remedy standard has been met. If a release has occurred, the objective will be to meet Remedy Standard A criteria to achieve clean closure. In the event that Remedy Standard A criteria cannot be met and Remedy Standard B is performed, OxyChem will obtain all required TRRP and RCRA approvals/authorizations.



## **4.0 Notification of Closure Activities**

OxyChem will notify TCEQ in writing of closure activities at least 45 days prior to the date on which the facility expects partial or final closure to commence. Such notification will be sent to both the TCEQ Central Office and the appropriate TCEQ District Office. OxyChem will also notify TCEQ in writing at least 10 days before beginning field activities or sampling to afford TCEQ personnel the opportunity to observe closure activities and/or split samples.

## 5.0 Closure Certification

Once closure of HAF CCIN-2 is complete, the unit will be inspected by OxyChem and an independent P.E. licensed in the State of Texas. Within 60 days of completing closure of the unit, OxyChem will submit to the Executive Director of the TCEQ (by registered mail) a certification from this independent P.E. that the unit was closed in accordance with the specifications contained in the approved Closure Plan. In addition, this certification, signed by both a facility representative and an independent P.E., will include documentation supporting the P.E.'s certification.

The closure certification report will include:

- A summary of closure activities performed;
- Locations of where verification, concrete (if collected), and soil samples were taken; and
- Results of analyses for all of the verification samples, concrete samples (if collected), and soil samples.

Drawings included in the report will identify sample locations and depths with identification numbers that are cross-referenced to sample results. In addition, the report will include the results of visual inspections performed both during and after closure.

## **6.0 Permit Modification**

If a change in the approved closure plan is required, OxyChem will submit a permit modification to the TCEQ requesting authorization of a change in the plan. Such a modification will occur, at a minimum, under the following circumstances:

- Changes in operating plans or facility design that affect the closure plan;
- There is a change in the expected year of closure; and/or
- During closure activities, unexpected events require modification of the approved closure plan.

In addition, if the Executive Director requests modifications to the Closure Plan, OxyChem will submit these modifications within 60 days of the Executive Director's request or within 30 days if changes occur during the closure.

## **7.0 Closure Schedule**

A closure schedule for the unit is provided in Table 2. This table also indicates the estimated number of days required to complete each step of the closure task. The total number of days anticipated to close HAF CCIN-2 following notification to the TCEQ is 82 days.

This schedule does not account for delays that may be caused by force majeure, including without limitations, fires, floods, riots, or strikes. If any of the aforementioned circumstances occur, OxyChem will submit a written request to the Executive Director of the TCEQ to extend the time allowed for closure.

## 8.0 Closure Cost Estimate

Estimated closure costs for HAF CCIN-2 are summarized in Table 3 and supporting information for the estimates is provided in Appendix A. The estimated costs for closure of the furnace were updated with a July 2020 permit modification and subsequently reviewed and approved by TCEQ. Estimates were developed in accordance with the requirements set forth in 40 CFR 264.142 and TCEQ recommendations contained in the Industrial Solid Waste Technical Guideline No. 10 (12/7/2017). As such, this estimate reflects "worst case" conditions at the time of closure. The Table 3 cost estimates are based on the 2019 values that have been updated using the inflation factors for 2020 to 2024 ( $1.012 \times 1.042 \times 1.070 \times 1.036 \times 1.024 = 1.197$ ), which results in a multiplier of 1.197.

Activities reflected in this estimate may differ somewhat from the activities that would be conducted by a closure led by OxyChem. In addition, this cost estimate is based on the fact that these facilities are constructed on a concrete slab and that the facility has had no record of a release to the environment. The following summarizes the basis of the closure cost estimates:

- Closure will commence at a point in the facility's operating life when closure is the most expensive;
- Closure is based on abandonment of the site at full capacity;
- Closure activities are performed by a third party;
- The units are at capacity at the time of closure;
- Containment will prevent entry of rainwater into the closure area during stormwater events;
- The hazardous waste units and concrete will be cleaned using high pressure/steam cleaning;
- For each sampling event, one sample will be collected from each hazardous waste unit and the rinsewater;

- It is assumed that the units will be triple rinsed and then samples collected and analyzed;
- It is assumed that two concrete and two soil samples will be collected and analyzed to determine potential contamination of concrete and soil;
- Liquid waste and washwaters will be disposed offsite; and
- Solid and sludge wastes will be shipped offsite for disposal at an authorized TSD facility.

## Tables

**Table 1 Sample Analysis Methods**

| Unit       | Parameters        | EPA Analytical Methods |
|------------|-------------------|------------------------|
| HAF CCIN-2 | Volatile organics | SW-846, 8260           |

**Table 2 Closure Schedule**

| Activity                                                          | Schedule (days)     |
|-------------------------------------------------------------------|---------------------|
| Notify TCEQ of closure                                            | 45 (prior to start) |
| <b>Closure activities begin – after prior 45 day notification</b> |                     |
| Remove wastes                                                     | 3                   |
| Decontaminate unit and concrete                                   | 4                   |
| Collect rinsate, concrete (if collected), and soil samples        | 2                   |
| Analyze rinsate, concrete (if collected), and soil samples        | 21                  |
| Re-rinse, resample, and reanalyze, if necessary                   | 22                  |
| Prepare certification of closure report                           | 30                  |
| Total number of days for closure                                  | 82                  |

**Table 3 Closure Cost Estimate for HAF CCIN-2**

| Task                                       | Cost      |
|--------------------------------------------|-----------|
| Rinsing and disposal of rinsate            | \$85,466  |
| Combust natural gas                        | \$479     |
| Removal of ash, etc.                       | \$74,166  |
| Decontamination of cleanup equipment       | \$1,197   |
| Sampling and associated laboratory charges | \$1,197   |
| Engineering Inspection/Supervision         | \$5,746   |
| Subtotal                                   | \$168,251 |
| 10% Contingency                            | \$16,825  |
| Total Unit Closure Cost (2024 Dollars)     | \$185,076 |



## **Appendix A**

### **Supporting Information for Closure Cost Estimate**

### Closure Cost Estimate for HAF CCIN-2

| Activity                                                                                 | Cost      |
|------------------------------------------------------------------------------------------|-----------|
| <b>Flush Furnace, Piping, and Pumps with Appropriate Solvent and Dispose of Rinsate</b>  |           |
| 8 hours of labor @ \$50/hr                                                               | \$400     |
| 1,000 gallons solvent @ \$5/gallon                                                       | \$5,000   |
| 35,000 pounds (3,000 gallons) of waste @ \$1/lb disposal                                 | \$35,000  |
| 1,000 gallons spent solvent @ \$5/gallon                                                 | \$5,000   |
| 1 trip @ \$2,000/trip                                                                    | \$26,000  |
| Subtotal                                                                                 | \$71,400  |
| <b>Burn Natural Gas</b>                                                                  |           |
| 4 hours of labor and natural gas @ \$100/hr                                              | \$400     |
| Subtotal                                                                                 | \$400     |
| <b>Remove and Dispose of Ash, Scrubber Water, Absorber Effluents, and Spent Catalyst</b> |           |
| 16 hours of labor @ \$50/hr                                                              | \$800     |
| 4 drums of ash @ \$500/drum                                                              | \$2,000   |
| 21,500 gallons of liquids @ \$2/gallon                                                   | \$43,000  |
| 5.4 tons of catalyst @ \$400/ton                                                         | \$2,160   |
| 7 trips @ \$2,000/trip                                                                   | \$14,000  |
| Subtotal                                                                                 | \$61,960  |
| <b>Decontaminate Equipment</b>                                                           |           |
| 10 hours of labor @ \$100/hr                                                             | \$1,000   |
| Subtotal                                                                                 | \$1,000   |
| <b>Laboratory Analysis</b>                                                               |           |
| 2 samples @ \$500/sample                                                                 | \$1,000   |
| Subtotal                                                                                 | \$1,000   |
| <b>Engineer's Inspection and Certification</b>                                           |           |
| 24 hours of labor @ \$200/hr                                                             | \$4,800   |
| Subtotal                                                                                 | \$4,800   |
| <b>Subtotal</b>                                                                          | \$140,560 |
| 10% Contingency                                                                          | \$14,056  |
| <b>TOTAL</b>                                                                             | \$154,616 |

- Notes: 1. All costs are in 2019 dollars
2. In order to determine the amount of rinsates generated, OxyChem first considered that the flow rate to the unit is ~8 gpm with 250 minutes of flush time for solvent and 500 minutes of flush time for water.

## **Attachment VIII.**

### **Financial Assurance**



**Occidental Chemical Corporation**  
A subsidiary of Occidental Petroleum Corporation

P.O. Drawer CC, Ingleside, Texas 78362-0710  
4133 Hwy. 361, Gregory, Texas 78359-6240

October 15, 2025

Mr. Robert Patton, Jr.  
Manager, Industrial and Hazardous Waste Permits Section  
Texas Commission on Environmental Quality  
Building F, MC 130 12100 Park 35 Circle  
Austin, Texas 78753

Re: Financial Disclosure Letter for Occidental Chemical Corporation Permit Renewal  
Hazardous Waste Permit No. 50322  
Industrial Solid Waste Registration No. 38280  
EPA ID No. TXD 982 286 932  
RN100211176; CN600125256

Dear Mr. Patton:

This letter is furnished to you in response to financial disclosure requirements as applicable under Texas Health and Safety Code Section 361.085 and Title 30, Texas Administrative Code (30 TAC), Section 305.50 to provide assurance that Occidental Chemical Corporation has sufficient financial resources.

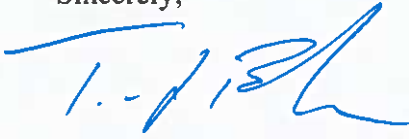
In keeping with the above law and rule requirements I hereby certify that Occidental Chemical Corporation is adequately capitalized and has sufficient financial resources to operate, close, provide post-closure care for and perform corrective action for the above-referenced facility in a safe manner, and in compliance with the permit and all applicable rules.

Occidental Chemical Corporation currently provides a financial assurance mechanism as set out in 30 TAC, Chapter 37, Subchapter C to meet Occidental Chemical Corporation's financial assurance obligations the following:

OxyChem-Ingleside, TX currently provides a letter of credit financial assurance mechanism as set out in 30 TAC, Chapter 37, Subchapter C to meet Occidental Chemical Corporation's financial assurance obligations.

I am authorized to make these statements on behalf of Occidental Chemical Corporation. I understand that the TCEQ may request additional information as part of their review.

Sincerely,

A handwritten signature in blue ink, appearing to read "T. Behne", with a stylized flourish at the end.

Todd J. Behne  
Plant Manager

## **Attachment IX.**

### **Releases from Solid Waste Units and Corrective Action**

**Attachment IX**

**Solid Waste Management Units**

**OxyChem**  
**Ingleside, Texas**

## Table of Contents

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| 2.0 | Facility Units.....             | 2 |
| 3.0 | Ongoing Corrective Action ..... | 3 |

## Appendices

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| Appendix A | Notice of Registration – August 14, 2025 |
| Appendix B | January 22, 2003 TCEQ Letter             |
| Appendix C | Preliminary Review Facility Checklist    |
| Appendix D | Preliminary Review Unit Checklist        |



## **1.0 Background**

The original application for Permit No. HW-50322 was submitted around 1990 to authorize the operation of halogen acid furnaces CCIN-1 and CCIN-2. As part of that application, OxyChem included information on solid waste management units (SWMUs) at the facility. When Permit No. HW-50322 was issued on September 23, 1991, it contained RCRA Facility Investigation (RFI) provisions for select units.

OxyChem has since completed investigation and evaluation of all SWMUs identified in the original permit. Via TCEQ letter dated January 22, 2003 (see Appendix B), RFI obligations had been met at the facility. Pursuant to Provision IX.C of each of the RCRA permits issued since June 16, 2005, there are no RFI units currently identified for the facility.

## 2.0 Facility Units

Attachment A contains a copy of the current notice of registration (NOR) for the facility. As indicated on the NOR, there are 133 units at the facility. The following units are reflected as being closed:

- Tank (NOR Unit No. 005);
- Container Storage Area (NOR Unit No. 006);
- Misc. Storage Containers (NOR Unit No. 048);
- Tank (NOR Unit No. 081); and
- Tank (NOR Unit No. 075).

The following units are reflected as being inactive:

- Tank (NOR Unit No. 001);
- Container Storage Area (NOR Unit No. 002);
- Waste Pile (NOR Unit No. 004);
- Tank (NOR Unit No. 014);
- Sump (NOR Unit No. 015);
- Sump (NOR Unit No. 016);
- Tank (NOR Unit No. 018);
- Misc. Storage Containers (NOR Unit No. 019);
- Tank (NOR Unit No. 020);
- Misc. Storage Containers (NOR Unit No. 021);
- EDC Wastewater Tanks (NOR Units 024 through 031 and 034);
- Tank (NOR Unit No. 051);
- Tank (NOR Unit No. 052);
- Misc. Storage Containers (NOR Unit No. 077);
- Misc. Storage Containers (NOR Unit No. 079);
- Container Storage Area (NOR Unit No. 088);
- Container Storage Area (NOR Unit No. 096); and
- Misc. Storage Containers (NOR Unit No. 097).

The remaining 102 units at the facility are indicated as being active on the NOR.

### **3.0 Ongoing Corrective Action**

OxyChem has completed all RFI activities for the facility, and there are no ongoing corrective action activities at the site.

## **Appendix A**

### **Notice of Registration August 14, 2025**

38280

OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

Solid Waste Registration Number: 38280 EPA Id: TXD982286932

Company Name: Occidental Chemical Corporation  
Site Name: OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT  
Site Location: TWO MILES WEST OF HWY 1069 ON HWY 361  
Primary Contact: BAGGETT, ARON  
Mailing Address: PO BOX CC  
Region: 14  
County: 205 SAN PATRICIO  
Land Type: Private  
Title: ENVIRONMENTAL  
Site Street Address: 4133 HWY 361  
Initial Registration Date: 12/11/1987  
Last Amendment Date: 08/13/2025  
Last Date NOR Computer update: 08/13/2025  
Phone: 361-776-6395

INGLESIDE, TX 78362-0710

GREGORY, TX 78359

Registration Status: Active  
Registration Type: Generator Receiver  
Generator Type: Industrial  
Receiver Type: Captive  
Transporter Type:   
Transport Wst Class:   
Reporting Method: STEERS  
Hazardous Waste Generation Status: Large Quantity Generator

Universal Waste Activity:  
Large Quantity Handler of Universal Waste (you accumulate 5,000 kg or more):  
Type(s) Managed:  
Destination Facility for Universal Waste:

NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing  
Tax Identification #: 11604847324  
Handler Status:

Operator Information

Name: Occidental Chemical Corporation  
Phone: 361-776-6050  
Address: PO BOX CC  
INGLESIDE, TX 78362-0710  
Owner Information:  
Name: Occidental Chemical Corporation  
Phone: 361-776-6050  
Address: PO BOX CC  
INGLESIDE, TX 78362-0710

Billing Contact:  
Billing Address: PO BOX CC  
INGLESIDE, TX 78362-0710  
Title:  
Phone: 361-776-6240

Other Contact: Manager, Environmental  
Mailing Address: PO BOX CC  
INGLESIDE, TX 78362-0710  
Role: IHW: Owner Contact  
Phone: 361-776-6050

As of 08/13/2025 - The next unassigned sequence number for WASTES is 9451 and  
The next unassigned sequence number for UNITS is 134

## Industrial and Hazardous Waste

\*\*\*\*\*  
WASTE INFORMATION  
\*\*\*\*\*

| Texas Waste Code                                                                     | Waste Class | Status | Date of Status | Managed Onsite/Offsite | Radio-active | TCEQ Audit Complete |
|--------------------------------------------------------------------------------------|-------------|--------|----------------|------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                            |             |        |                |                        |              |                     |
| 0016202H                                                                             | H           | Active | 08/13/2025     | On & Off               | No           | No                  |
| <b>Description from Generator:</b>                                                   |             |        |                |                        |              |                     |
| <b>Texas Form Code:</b> Oxy Vinyls La Porte Chlorinated By-product                   |             |        |                |                        |              |                     |
| <b>EPA Form Code:</b> 202 Halogenated (e.g., chlorinated) solvent                    |             |        |                |                        |              |                     |
| <b>Origin Code:</b> W219 Other organic liquid                                        |             |        |                |                        |              |                     |
| <b>Source Code:</b> 4 Received from off-site and was not recycled or treated on-site |             |        |                |                        |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing             |             |        |                |                        |              |                     |
| <b>Company's Internal Code(s):</b> CC0016                                            |             |        |                |                        |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D001                                             |             |        |                |                        |              |                     |
| <b>Current Management Units:</b> K019 K020                                           |             |        |                |                        |              |                     |
| Container storage area                                                               |             |        |                |                        |              | 022                 |
| Incinerator                                                                          |             |        |                |                        |              | 065 066             |
| Tank (surface)                                                                       |             |        |                |                        |              | 082 023             |

|                                                                                                          |   |        |            |          |    |    |
|----------------------------------------------------------------------------------------------------------|---|--------|------------|----------|----|----|
| 00700011                                                                                                 | 1 | Active | 08/13/2025 | Off-site | No | No |
| <b>Description from Generator:</b> Lab packs (NH) resulting from disposal of laboratory chemicals; 12/93 |   |        |            |          |    |    |
| <b>Texas Form Code:</b> 001 Lab packs of old chemicals only                                              |   |        |            |          |    |    |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                       |   |        |            |          |    |    |
| <b>Company's Internal Code(s):</b> CC0070                                                                |   |        |            |          |    |    |
| <b>Current Management Units:</b> None                                                                    |   |        |            |          |    |    |

|                                     |                                                                |
|-------------------------------------|----------------------------------------------------------------|
| <b>Description from Generator:</b>  | Lab packs (H) resulting from disposal of lab chemicals; 12/93  |
| <b>Texas Form Code:</b>             | 001 Lab packs of old chemicals only                            |
| <b>EPA Form Code:</b>               | W001 Lab packs with no acute hazardous waste                   |
| <b>Origin Code:</b>                 | 1 Generated on-site from a product process or service activity |
| <b>Source Code:</b>                 | G22 Laboratory analytical wastes (used chemicals)              |
| <b>NAICS Code:</b>                  | 325199 All Other Basic Organic Chemical Manufacturing          |
| <b>Company's Internal Code(s):</b>  | CC0075                                                         |
| <b>EPA Hazardous Waste Numbers:</b> | D002 D009                                                      |
| <b>Current Management Units:</b>    | None                                                           |

|                                    |                                                                                               |
|------------------------------------|-----------------------------------------------------------------------------------------------|
| <b>Description from Generator:</b> | Debris from firebox/furnace repair – fire brick, insulation, soil wooden pallets, etc.; 10/93 |
| <b>Texas Form Code:</b>            | 390 Nonhazardous concrete/cement/construction debris                                          |
| <b>Origin Code:</b>                | 1 Generated on-site from a product process or service activity                                |
| <b>Company's Internal Code(s):</b> | CC0100                                                                                        |
| <b>Current Management Units:</b>   | Container storage area 103<br>Miscellaneous storage containers 072                            |

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| 01029992                                                                                                                                                                                                                        | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Plant trash from offices and plant production. Includes paper, glass, scrapmetal, plastic, wood, empty containers.                                                                           |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 999 Class 2 plant trash                                                                                                                                                                                 |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0102                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103                                                                                                                                                                     |             |        |                |                         |              |                     |
| Miscellaneous storage containers 071                                                                                                                                                                                            |             |        |                |                         |              |                     |
|                                                                                                                                                                                                                                 |             |        |                |                         |              |                     |
| 01049022                                                                                                                                                                                                                        | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Supplemental plant production refuse from manufacture of chlorine, caustic soda,ethylene dichloride. This includes metal parts, floor sweepings, and scrap materials. Initial generation 198 |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 902 Class 2 supplemental plant production refuse                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0104                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103                                                                                                                                                                     |             |        |                |                         |              |                     |
| Miscellaneous storage containers 071                                                                                                                                                                                            |             |        |                |                         |              |                     |
|                                                                                                                                                                                                                                 |             |        |                |                         |              |                     |
| 0106489H                                                                                                                                                                                                                        | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Clean up of fuel / lubrication oil spills, leaks, and drips                                                                                                                                  |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 489 Petroleum contaminated solids                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W409 Other organic solids                                                                                                                                                                                 |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Source Code:</b> G09 Other production or service-related processes                                                                                                                                                           |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0106                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D040                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 067 022                                                                                                                                                                 |             |        |                |                         |              |                     |
| Miscellaneous storage containers 125                                                                                                                                                                                            |             |        |                |                         |              |                     |
|                                                                                                                                                                                                                                 |             |        |                |                         |              |                     |
| 01073101                                                                                                                                                                                                                        | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Clean up of oil and fuel spills. Estimated initial date of generation 1988.                                                                                                                  |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 310 Spent solid filters or adsorbents                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal                                                                                                                                  |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0107                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103 101                                                                                                                                                                 |             |        |                |                         |              |                     |
| Miscellaneous storage containers 035 072 128 125                                                                                                                                                                                |             |        |                |                         |              |                     |

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                      | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                             |             |        |                |                         |              |                     |
| 0108407H                                                                                                                              | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Solvent contaminated material generated from maintenance activities.                               |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 407 Other halogenated organic solids                                                                          |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W409 Other organic solids                                                                                       |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                    |             |        |                |                         |              |                     |
| <b>Source Code:</b> G09 Other production or service-related processes                                                                 |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing                                                                         |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0108                                                                                             |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D040 F001 F003                                                                                    |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 022                                                                           |             |        |                |                         |              |                     |
|                                                                                                                                       |             |        |                |                         |              |                     |
| 0110114I                                                                                                                              | 1           | Active | 08/13/2025     | Off-site                | No           | No                  |
| <b>Description from Generator:</b> Co-generation wastewater stream                                                                    |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 114 Other aqueous waste with low dissolved solids                                                             |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                    |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0110                                                                                             |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 072                                                                 |             |        |                |                         |              |                     |
| Sump 092 091                                                                                                                          |             |        |                |                         |              |                     |
| Tank 093 094                                                                                                                          |             |        |                |                         |              |                     |
|                                                                                                                                       |             |        |                |                         |              |                     |
| 01134092                                                                                                                              | 2           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Waste is generated during the disassembly/demolition or the construction of onsite cooling towers. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 409 Other non-halogenated organic solids                                                                      |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                    |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0113                                                                                             |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 105                                                                           |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                                  |             |        |                |                         |              |                     |
|                                                                                                                                       |             |        |                |                         |              |                     |
| 0114319I                                                                                                                              | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Cooling tower repairs, Initial generation 1988.                                                    |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                              |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                    |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0114                                                                                             |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103                                                                           |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                                  |             |        |                |                         |              |                     |



38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                   | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio- active | TCEQ Audit Complete |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|---------------|---------------------|
| ***** Active Wastes *****                                                                                                                          |             |        |                |                         |               |                     |
| 0117211H                                                                                                                                           | H           | Active | 08/13/2025     | On & Off                | No            | No                  |
| <b>Description from Generator:</b> Spent paint thinner is generated during plant maintenance activities. Initial generation is estimated in 1988.  |             |        |                |                         |               |                     |
| <b>Texas Form Code:</b> 211 Paint thinner or petroleum distillates                                                                                 |             |        |                |                         |               |                     |
| <b>EPA Form Code:</b> W211 Paint thinner or petroleum distillates                                                                                  |             |        |                |                         |               |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                 |             |        |                |                         |               |                     |
| <b>Source Code:</b> G06 Painting and coating                                                                                                       |             |        |                |                         |               |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                           |             |        |                |                         |               |                     |
| <b>Company's Internal Code(s):</b> CC0117                                                                                                          |             |        |                |                         |               |                     |
| <b>EPA Hazardous Waste Numbers:</b> D001 F003 F005                                                                                                 |             |        |                |                         |               |                     |
| <b>Current Management Units:</b> Container storage area 113 022                                                                                    |             |        |                |                         |               |                     |
| Distillation/Solvent recovery unit 095                                                                                                             |             |        |                |                         |               |                     |
| Miscellaneous storage containers 125                                                                                                               |             |        |                |                         |               |                     |
|                                                                                                                                                    |             |        |                |                         |               |                     |
| 01184091                                                                                                                                           | 1           | Active | 08/13/2025     | On & Off                | No            | No                  |
| <b>Description from Generator:</b> Waste Permantite Powder from maintenance activities.                                                            |             |        |                |                         |               |                     |
| <b>Texas Form Code:</b> 409 Other non-halogenated organic solids                                                                                   |             |        |                |                         |               |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                 |             |        |                |                         |               |                     |
| <b>Company's Internal Code(s):</b> CC0118                                                                                                          |             |        |                |                         |               |                     |
| <b>Current Management Units:</b> Container storage area 103                                                                                        |             |        |                |                         |               |                     |
| Miscellaneous storage containers 072                                                                                                               |             |        |                |                         |               |                     |
|                                                                                                                                                    |             |        |                |                         |               |                     |
| 0121319H                                                                                                                                           | H           | Active | 08/13/2025     | On-site                 | No            | No                  |
| <b>Description from Generator:</b> Broken lamps generated during replacement and maintenance of lights.                                            |             |        |                |                         |               |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                           |             |        |                |                         |               |                     |
| <b>EPA Form Code:</b> W319 Other inorganic solids                                                                                                  |             |        |                |                         |               |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                 |             |        |                |                         |               |                     |
| <b>Source Code:</b> G09 Other production or service-related processes                                                                              |             |        |                |                         |               |                     |
| <b>NAICS Code:</b> 324110 Petroleum Refineries                                                                                                     |             |        |                |                         |               |                     |
| <b>Company's Internal Code(s):</b> CC0121                                                                                                          |             |        |                |                         |               |                     |
| <b>EPA Hazardous Waste Numbers:</b> D009                                                                                                           |             |        |                |                         |               |                     |
| <b>Current Management Units:</b> Container storage area 022 067 113                                                                                |             |        |                |                         |               |                     |
| Miscellaneous storage containers 125                                                                                                               |             |        |                |                         |               |                     |
|                                                                                                                                                    |             |        |                |                         |               |                     |
| 01323192                                                                                                                                           | 2           | Active | 08/13/2025     | On & Off                | No            | No                  |
| <b>Description from Generator:</b> Bead blaster material is generated from the cleaning of the maintenance beadblaster machine which cleans parts. |             |        |                |                         |               |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                           |             |        |                |                         |               |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                 |             |        |                |                         |               |                     |
| <b>Company's Internal Code(s):</b> CC0132                                                                                                          |             |        |                |                         |               |                     |
| <b>Current Management Units:</b> Container storage area 103                                                                                        |             |        |                |                         |               |                     |
| Miscellaneous storage containers 072                                                                                                               |             |        |                |                         |               |                     |



38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                     | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                            |             |        |                |                         |              |                     |
| 0136206H                                                                                                                                             | H           | Active | 08/13/2025     | Off-site                | No           | No                  |
| <b>Description from Generator:</b> Waste oil generated during maintenance of pumps or other oil containing equipment.                                |             |        |                |                         |              |                     |
| Texas Form Code: 206 Waste oil                                                                                                                       |             |        |                |                         |              |                     |
| EPA Form Code: W206 Waste oil                                                                                                                        |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                          |             |        |                |                         |              |                     |
| Source Code: G16 Oil changes and filter or battery replacement                                                                                       |             |        |                |                         |              |                     |
| NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing                                                                                    |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0136                                                                                                                   |             |        |                |                         |              |                     |
| EPA Hazardous Waste Numbers: D001 F001 F002                                                                                                          |             |        |                |                         |              |                     |
| Current Management Units: Container storage area 022 113 067                                                                                         |             |        |                |                         |              |                     |
| Incinerator 066 065                                                                                                                                  |             |        |                |                         |              |                     |
| Miscellaneous storage containers 125                                                                                                                 |             |        |                |                         |              |                     |
| 01372962                                                                                                                                             | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Waste Antifreeze                                                                                                  |             |        |                |                         |              |                     |
| Texas Form Code: 296 Ethylene glycol based antifreeze                                                                                                |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                          |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0137                                                                                                                   |             |        |                |                         |              |                     |
| Current Management Units: Miscellaneous storage containers 128 072                                                                                   |             |        |                |                         |              |                     |
| 0138219H                                                                                                                                             | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Unused resin material used for fiberglass work.                                                                   |             |        |                |                         |              |                     |
| Texas Form Code: 219 Other organic liquids                                                                                                           |             |        |                |                         |              |                     |
| EPA Form Code: W219 Other organic liquid                                                                                                             |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                          |             |        |                |                         |              |                     |
| Source Code: G11 Discarding off-specification or out-of-date chemicals or products                                                                   |             |        |                |                         |              |                     |
| NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing                                                                                    |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0138                                                                                                                   |             |        |                |                         |              |                     |
| EPA Hazardous Waste Numbers: D001 D003                                                                                                               |             |        |                |                         |              |                     |
| Current Management Units: Container storage area 022                                                                                                 |             |        |                |                         |              |                     |
| 0139219H                                                                                                                                             | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Unused sealant/adhesive that was not used during maintenance activities that is no longer needed, or out of spec. |             |        |                |                         |              |                     |
| Texas Form Code: 219 Other organic liquids                                                                                                           |             |        |                |                         |              |                     |
| EPA Form Code: W219 Other organic liquid                                                                                                             |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                          |             |        |                |                         |              |                     |
| Source Code: G11 Discarding off-specification or out-of-date chemicals or products                                                                   |             |        |                |                         |              |                     |
| NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing                                                                                    |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0139                                                                                                                   |             |        |                |                         |              |                     |
| EPA Hazardous Waste Numbers: D001                                                                                                                    |             |        |                |                         |              |                     |
| Current Management Units: Container storage area 067 022                                                                                             |             |        |                |                         |              |                     |

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Date: 08/14/2025

## Notice of Registration Industrial and Hazardous Waste

# OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                                                                                                                                                                                                        | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                                                                                                                                                                                                               |             |        |                |                         |              |                     |
| 0140209H                                                                                                                                                                                                                                                                                                                                                                                                                | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Unused varnish used as coating on insulation work.                                                                                                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 209 Organic paint, ink, lacquer, or varnish                                                                                                                                                                                                                                                                                                                                                     |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W209 Paint, ink, lacquer, or varnish                                                                                                                                                                                                                                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                      |             |        |                |                         |              |                     |
| <b>Source Code:</b> G09 Other production or service-related processes                                                                                                                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                                                                                                                                                |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0140                                                                                                                                                                                                                                                                                                                                                                               |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D001                                                                                                                                                                                                                                                                                                                                                                                |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 022                                                                                                                                                                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| 0141210I                                                                                                                                                                                                                                                                                                                                                                                                                | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Unused epoxy/adhesive that was not used during maintenance, and is no longer needed, and it is out of spec.                                                                                                                                                                                                                                                                          |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 210 Adhesives or epoxies                                                                                                                                                                                                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                      |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0141                                                                                                                                                                                                                                                                                                                                                                               |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103                                                                                                                                                                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                                                                                                                                                                                                                                                                                                                    |             |        |                |                         |              |                     |
| 0142319I                                                                                                                                                                                                                                                                                                                                                                                                                | 1           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Waste fireproofing from maintenance activities                                                                                                                                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                                                                                                                                                                                                |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                      |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0142                                                                                                                                                                                                                                                                                                                                                                               |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103                                                                                                                                                                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                                                                                                                                                                                                                                                                                                                    |             |        |                |                         |              |                     |
| 0150102I                                                                                                                                                                                                                                                                                                                                                                                                                | 1           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Wastewater from organic process units and facility stormwater collected in sumpsand/or dikes. The water is steam stripped to recover organics. The tails fromthe steam strippers become "wastewater" which is processed in a biological wastewater treatment system. The steam stripper tails are analyzed periodically toverify that organic concentrations are less than TCLP limi |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 102 Aqueous waste with low other toxic organics                                                                                                                                                                                                                                                                                                                                                 |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                      |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0150                                                                                                                                                                                                                                                                                                                                                                               |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 072                                                                                                                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| Sump 016 062 015                                                                                                                                                                                                                                                                                                                                                                                                        |             |        |                |                         |              |                     |
| Tank (surface) 032 040 043 060 045 047 059 037 031 038 036 042 041 044 049 039 046 061 017                                                                                                                                                                                                                                                                                                                              |             |        |                |                         |              |                     |

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                      | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                             |             |        |                |                         |              |                     |
| 01513071                                                                                                                                              | 1           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Rust/scale that is removed from decontaminated process equipment                                                   |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 307 Metal scale, filings or scrap                                                                                             |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                    |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0151                                                                                                             |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 084 067                                                                                       |             |        |                |                         |              |                     |
| Miscellaneous storage containers 035                                                                                                                  |             |        |                |                         |              |                     |
|                                                                                                                                                       |             |        |                |                         |              |                     |
| 0152319H                                                                                                                                              | H           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Spent sandblasting media used to clean process equipment and vessels.                                              |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                              |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W319 Other inorganic solids                                                                                                     |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                    |             |        |                |                         |              |                     |
| <b>Source Code:</b> G19 Other one-time or intermittent processes                                                                                      |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                              |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0152                                                                                                             |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D008                                                                                                              |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 067                                                                                           |             |        |                |                         |              |                     |
|                                                                                                                                                       |             |        |                |                         |              |                     |
| 01604881                                                                                                                                              | 1           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Spent railroad ties are generated when wooden railroad ties are removed from service and can no longer be used.    |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 488 Wood debris                                                                                                               |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                    |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC 0160                                                                                                            |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 072                                                                                 |             |        |                |                         |              |                     |
|                                                                                                                                                       |             |        |                |                         |              |                     |
| 01734902                                                                                                                                              | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Sandblasting sand used in daily maintenance activities throughout the plant. Initial date of generation was 06/87. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 490 Sand blasting waste                                                                                                       |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                    |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0173                                                                                                             |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 067 103 107 127                                                                               |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072 083                                                                                                              |             |        |                |                         |              |                     |



## 38280

| Texas Waste Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |             |        |                |                         |              |                     |
| 01792061                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Used oil generated from equipment oil change outs.<br><b>Texas Form Code:</b> 206 Waste oil<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC0179<br><b>Current Management Units:</b> Container storage area 112 103<br>Miscellaneous storage containers 128 072                                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| 0180309H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Battery changeout<br><b>Texas Form Code:</b> 309 Batteries or battery parts, casings, cores<br><b>EPA Form Code:</b> W309 Batteries, battery parts, cores, casings<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Source Code:</b> G16 Oil changes and filter or battery replacement<br><b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing<br><b>Company's Internal Code(s):</b> CC0180<br><b>EPA Hazardous Waste Numbers:</b> D004<br><b>Current Management Units:</b> Container storage area 113 022 |             |        |                |                         |              |                     |
| 01843101                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Used oil filters<br><b>Texas Form Code:</b> 310 Spent solid filters or adsorbents<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC0184<br><b>Current Management Units:</b> Container storage area 103<br>Miscellaneous storage containers 072 128 125                                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| 01853192                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Drained, non-PCB electrical equipment (capacitors and transformers)<br><b>Texas Form Code:</b> 319 Other waste inorganic solids<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC0185<br><b>Current Management Units:</b> Container storage area 103<br>Miscellaneous storage containers 072                                                                                                                                                                                                 |             |        |                |                         |              |                     |

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                 | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|----------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                        |             |        |                |                         |              |                     |
| 01863191                                                                                                                         | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Drained, oil-containing equipment removed from service. Oil is drained from equipment.        |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                         |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal                                   |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0186                                                                                        |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103                                                                      |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072 035                                                                                         |             |        |                |                         |              |                     |
| 01873192                                                                                                                         | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Activated alumina used as a desiccant throughout the plant. White ball form.                  |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                         |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                               |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0187                                                                                        |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103                                                                      |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                             |             |        |                |                         |              |                     |
| 01884061                                                                                                                         | 1           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> RCRA empty containers - drums, totes, etc. from industrial water treatment chemicals and oil. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 406 Empty fiber or plastic containers                                                                    |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                               |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0188                                                                                        |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 070 087 067 104                                                          |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                             |             |        |                |                         |              |                     |
| 0190404H                                                                                                                         | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> spent carbon canisters from aerosol can puncturing devices                                    |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 404 Spent carbon                                                                                         |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W310 Filters, solid adsorbents, ion exchange resins and spent carbon                                       |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 5 Residual from on-site treatment, disposal or recycling of hazardous waste                                  |             |        |                |                         |              |                     |
| <b>Source Code:</b> G21 Air pollution control devices (baghouse dust, etc.)                                                      |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                         |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0190                                                                                        |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D040                                                                                         |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 022                                                                      |             |        |                |                         |              |                     |



## 38280

| Texas Waste Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |        |                |                         |              |                     |
| 01914891                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> HARDENED ASPHALT<br><b>Texas Form Code:</b> 489 Petroleum contaminated solids<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC0191<br><b>Current Management Units:</b> Container storage area 103<br>Miscellaneous storage containers 072                                                                                                                                                                                                                                                                                                 |             |        |                |                         |              |                     |
| 0192204H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Residue from spray cans that have been punctured.<br><b>Texas Form Code:</b> 204 Halogenated/non-halogenated solvent mixture<br><b>EPA Form Code:</b> W204 Concentrated halogenated/ non-halogenated solvent mixture<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Source Code:</b> G19 Other one-time or intermittent processes<br><b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing<br><b>Company's Internal Code(s):</b> CC0192<br><b>EPA Hazardous Waste Numbers:</b> D001 D040<br><b>Current Management Units:</b> Container storage area 022 |             |        |                |                         |              |                     |
| 01933192                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> uncontaminated fire brick material from periodic maintenance or turnaroundactivities<br><b>Texas Form Code:</b> 319 Other waste inorganic solids<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC0193<br><b>Current Management Units:</b> Container storage area 103<br>Miscellaneous storage containers 072 035                                                                                                                                                                                                                          |             |        |                |                         |              |                     |
| 01943192                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Uncontaminated plastic packing removed during periodic maintenance orturnaround activities<br><b>Texas Form Code:</b> 319 Other waste inorganic solids<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC0194<br><b>Current Management Units:</b> Container storage area 103<br>Miscellaneous storage containers 072 035                                                                                                                                                                                                                    |             |        |                |                         |              |                     |



38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                  | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|---------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                         |             |        |                |                         |              |                     |
| 02003192                                                                                          | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> waste fireproofing material                                    |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                          |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0200                                                         |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103 085                                   |             |        |                |                         |              |                     |
| Miscellaneous storage containers 035 072                                                          |             |        |                |                         |              |                     |
|                                                                                                   |             |        |                |                         |              |                     |
| 0202211H                                                                                          | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Waste Gasoline                                                 |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 211 Paint thinner or petroleum distillates                                |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W211 Paint thinner or petroleum distillates                                 |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                |             |        |                |                         |              |                     |
| <b>Source Code:</b> G19 Other one-time or intermittent processes                                  |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                          |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0202                                                         |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D001 D018                                                     |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 022 113                                   |             |        |                |                         |              |                     |
| Miscellaneous storage containers 125                                                              |             |        |                |                         |              |                     |
|                                                                                                   |             |        |                |                         |              |                     |
| 0203211H                                                                                          | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Spill of curing agent.                                         |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 211 Paint thinner or petroleum distillates                                |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W211 Paint thinner or petroleum distillates                                 |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal    |             |        |                |                         |              |                     |
| <b>Source Code:</b> G19 Other one-time or intermittent processes                                  |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                          |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0203                                                         |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D001                                                          |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 067 022                                   |             |        |                |                         |              |                     |
|                                                                                                   |             |        |                |                         |              |                     |
| 02043012                                                                                          | 2           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Spill materials from release of corrosion inhibitor to ground. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 301 Soil contaminated with organics                                       |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0204                                                         |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 073                                       |             |        |                |                         |              |                     |

## Industrial and Hazardous Waste

| Texas Waste Code | Waste Class | Date of Status | Managed Onsite/ Offsite | Radioactive | TCEQ Audit Complete |
|------------------|-------------|----------------|-------------------------|-------------|---------------------|
|                  |             |                |                         |             |                     |

|          |   |        |            |          |    |
|----------|---|--------|------------|----------|----|
| 02052192 | 2 | Active | 08/13/2025 | On & Off | No |
| 02052192 | 2 | Active | 08/13/2025 | On & Off | No |

|          |   |        |            |          |    |    |
|----------|---|--------|------------|----------|----|----|
| 02052192 | 2 | Active | 08/13/2025 | On & Off | No | No |
|----------|---|--------|------------|----------|----|----|

**Description from Generator:** Unused/Unspent firefighting foam in plastic totes that have solidified due to weathering on the container.

**Texas Form Code:** 219 Other organic liquids  
**Origin Code:** 3 Derived from on-site management of a nonhazardous waste  
**Company's Internal Code(s):** CC0205  
**Current Management Units:** Miscellaneous storage containers 072

|                                     |   |        |            |                                                                            |      |                |
|-------------------------------------|---|--------|------------|----------------------------------------------------------------------------|------|----------------|
| 0226319H                            | H | Active | 08/13/2025 | On & Off                                                                   | No   | No             |
| <b>Description from Generator:</b>  |   |        |            |                                                                            |      |                |
|                                     |   |        |            | Heavy Ends tank cleaning residue combined with reboiler / exchanger scale. |      |                |
| <b>Texas Form Code:</b>             |   |        |            | 319 Other waste inorganic solids                                           |      |                |
| <b>EPA Form Code:</b>               |   |        |            | W319 Other inorganic solids                                                |      |                |
| <b>Origin Code:</b>                 |   |        |            | I Generated on-site from a product process or service activity             |      |                |
| <b>Source Code:</b>                 |   |        |            | G09 Other production or service-related processes                          |      |                |
| <b>NAICS Code:</b>                  |   |        |            | 325199 All Other Basic Organic Chemical Manufacturing                      |      |                |
| <b>Company's Internal Code(s):</b>  |   |        |            | CC0226                                                                     |      |                |
| <b>EPA Hazardous Waste Numbers:</b> |   |        |            | D001                                                                       | D007 | D019 D022 D028 |
| <b>Current Management Units:</b>    |   |        |            | Container storage area      084 022 113 067 087                            |      |                |
|                                     |   |        |            |                                                                            | K019 | K020           |

|                                    |   |                                                                                                                                                                                                                                                                                                                                                                                                        |            |          |    |    |
|------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------|----|----|
| 02274912                           | 2 | Active                                                                                                                                                                                                                                                                                                                                                                                                 | 08/13/2025 | On & Off | No | No |
| <b>Description from Generator:</b> |   | Dewatered biological treatment sludge (biomass) is generated from wastewater treatment plants operated at this facility. (a) VCM Unit - initial generation 4091; generation rate is approximately 4500 Y/yr. color of waste is white to brown. (b) EDC Unit - initial generation 1981; generation rate is approximately 400Y/yr. color of waste is brown to black due to iron hydroxides. <sup>1</sup> |            |          |    |    |
| <b>Texas Form Code:</b>            |   | 491 Dewatered biological treatment sludge                                                                                                                                                                                                                                                                                                                                                              |            |          |    |    |
| <b>Origin Code:</b>                |   | 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                         |            |          |    |    |
| <b>Company's Internal Code(s):</b> |   | CC0227                                                                                                                                                                                                                                                                                                                                                                                                 |            |          |    |    |
| <b>Current Management Units:</b>   |   | <div>Container storage area 107 084 087 115</div> <div>Miscellaneous storage containers 072</div>                                                                                                                                                                                                                                                                                                      |            |          |    |    |

|                                     |   |                                                                                                                                                                                                                                                                               |            |          |      |      |      |
|-------------------------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------|------|------|------|
| 0228491H                            | H | Active                                                                                                                                                                                                                                                                        | 08/13/2025 | On & Off | No   | No   |      |
| <b>Description from Generator:</b>  |   | Dewatered biological treatment sludge (biomass) is generated from the wastewater treatment plant operated at this facility. The stream is designated hazardous due to the derived from rule but meets treatment standards associated with K019, K020, F001, F003, F005, F025. |            |          |      |      |      |
| <b>Texas Form Code:</b>             |   | 491 Dewatered biological treatment sludge                                                                                                                                                                                                                                     |            |          |      |      |      |
| <b>EPA Form Code:</b>               |   | W409 Other organic solids                                                                                                                                                                                                                                                     |            |          |      |      |      |
| <b>Origin Code:</b>                 |   | 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                |            |          |      |      |      |
| <b>Source Code:</b>                 |   | G23 Wastewater treatment (sludge, filter cake, etc.)                                                                                                                                                                                                                          |            |          |      |      |      |
| <b>NAICS Code:</b>                  |   | 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                         |            |          |      |      |      |
| <b>Company's Internal Code(s):</b>  |   | CC0228                                                                                                                                                                                                                                                                        |            |          |      |      |      |
| <b>EPA Hazardous Waste Numbers:</b> |   | F001                                                                                                                                                                                                                                                                          | F003       | F005     | F025 | K019 | K020 |
| <b>Current Management Units:</b>    |   | Container storage area<br>Tank (surface)                                                                                                                                                                                                                                      |            |          |      |      |      |
|                                     |   | 115 087 106 113<br>042                                                                                                                                                                                                                                                        |            |          |      |      |      |



## 38280

| Texas Waste Code                                                                                                                                                     | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                            |             |        |                |                         |              |                     |
| 02403191                                                                                                                                                             | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> VCM process area trench material (non-hazardous)                                                                                  |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                             |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                   |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0240                                                                                                                            |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 089 087 073 067 106 109 084 115 107 113 114 068                                                              |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                                                                 |             |        |                |                         |              |                     |
| 0241301H                                                                                                                                                             | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Solvent contaminated media (typically soil) is generated during spill clean-up and/or general plant cleanup in the EDC/VCM units. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 301 Soil contaminated with organics                                                                                                          |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W301 Contaminated Soil                                                                                                                         |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal                                                                       |             |        |                |                         |              |                     |
| <b>Source Code:</b> G32 Cleanup of spill residues                                                                                                                    |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                             |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0241                                                                                                                            |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D028 K019 K020 U043 U077                                                                                                         |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area                                                                                                              |             |        |                |                         |              |                     |
| 0242303H                                                                                                                                                             | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Incinerator firebox solids from VCM Incinerators F-550 AND F-570.                                                                 |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 303 Ash, slag or other residue from incineration of waste                                                                                    |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W303 Ash                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 5 Residual from on-site treatment, disposal or recycling of hazardous waste                                                                      |             |        |                |                         |              |                     |
| <b>Source Code:</b> G19 Other one-time or intermittent processes                                                                                                     |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing                                                                                                        |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0242                                                                                                                            |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> F001 F003 F005 F025 K019 K020                                                                                                    |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area                                                                                                              |             |        |                |                         |              |                     |
| 0243319H                                                                                                                                                             | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Incinerator brick generated when VCM unit incinerators are cleaned out or rebricked.                                              |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                             |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W319 Other inorganic solids                                                                                                                    |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                   |             |        |                |                         |              |                     |
| <b>Source Code:</b> G09 Other production or service-related processes                                                                                                |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                             |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0243                                                                                                                            |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> F001 F003 F005 F025 K019 K020                                                                                                    |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area                                                                                                              |             |        |                |                         |              |                     |

## Date: 08/14/2025

## Notice of Registration

## Industrial and Hazardous Waste

## OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                                                                                                                                                                                                                            | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio- active | TCEQ Audit Complete |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|---------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                                                                                                                                                                                                                                   |             |        |                |                         |               |                     |
| 0244407H                                                                                                                                                                                                                                                                                                                                                                                                                                    | H           | Active | 08/13/2025     | On & Off                | No            | No                  |
| <b>Description from Generator:</b> VCM Furnace Coke - carbon residue; 12/91                                                                                                                                                                                                                                                                                                                                                                 |             |        |                |                         |               |                     |
| <b>Texas Form Code:</b> 407 Other halogenated organic solids                                                                                                                                                                                                                                                                                                                                                                                |             |        |                |                         |               |                     |
| <b>EPA Form Code:</b> W409 Other organic solids                                                                                                                                                                                                                                                                                                                                                                                             |             |        |                |                         |               |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                                          |             |        |                |                         |               |                     |
| <b>Source Code:</b> G19 Other one-time or intermittent processes                                                                                                                                                                                                                                                                                                                                                                            |             |        |                |                         |               |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                                                                                                                                                                    |             |        |                |                         |               |                     |
| <b>Company's Internal Code(s):</b> CC0244                                                                                                                                                                                                                                                                                                                                                                                                   |             |        |                |                         |               |                     |
| <b>EPA Hazardous Waste Numbers:</b> D001 D006 D007 D028 D043                                                                                                                                                                                                                                                                                                                                                                                |             |        |                |                         |               |                     |
| <b>Current Management Units:</b> Container storage area 022 113 067                                                                                                                                                                                                                                                                                                                                                                         |             |        |                |                         |               |                     |
| 02453931                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1           | Active | 08/13/2025     | On & Off                | No            | No                  |
| <b>Description from Generator:</b> Unused and spent copper chloride catalyst is generated during periodic catalyst change-outs. Miscellaneous items (plastic, trash, personal protective equipment) used during catalyst handling is also included. Containers are not necessarily packed similarly (e.g. some containers primarily catalyst, others contain primarily the miscellaneous items). Estimated date of initial generation 4090. |             |        |                |                         |               |                     |
| <b>Texas Form Code:</b> 393 Catalyst waste                                                                                                                                                                                                                                                                                                                                                                                                  |             |        |                |                         |               |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                                          |             |        |                |                         |               |                     |
| <b>Company's Internal Code(s):</b> CC0245                                                                                                                                                                                                                                                                                                                                                                                                   |             |        |                |                         |               |                     |
| <b>Current Management Units:</b> Container storage area 073 084 106 087 067 103 068                                                                                                                                                                                                                                                                                                                                                         |             |        |                |                         |               |                     |
| <b>Miscellaneous storage containers</b> 072                                                                                                                                                                                                                                                                                                                                                                                                 |             |        |                |                         |               |                     |
| 0246393H                                                                                                                                                                                                                                                                                                                                                                                                                                    | H           | Active | 08/13/2025     | On & Off                | No            | No                  |
| <b>Description from Generator:</b> spent copper chloride catalyst generated during periodic reactor clean-outs, plastic, trash, pipe may be included.                                                                                                                                                                                                                                                                                       |             |        |                |                         |               |                     |
| <b>Texas Form Code:</b> 393 Catalyst waste                                                                                                                                                                                                                                                                                                                                                                                                  |             |        |                |                         |               |                     |
| <b>EPA Form Code:</b> W319 Other inorganic solids                                                                                                                                                                                                                                                                                                                                                                                           |             |        |                |                         |               |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                                          |             |        |                |                         |               |                     |
| <b>Source Code:</b> G08 Removal of spent process liquids or catalysts                                                                                                                                                                                                                                                                                                                                                                       |             |        |                |                         |               |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                                                                                                                                                                    |             |        |                |                         |               |                     |
| <b>Company's Internal Code(s):</b> CC0246                                                                                                                                                                                                                                                                                                                                                                                                   |             |        |                |                         |               |                     |
| <b>EPA Hazardous Waste Numbers:</b> D028                                                                                                                                                                                                                                                                                                                                                                                                    |             |        |                |                         |               |                     |
| <b>Current Management Units:</b> Container storage area 068 067 073 087 113 106 022 084                                                                                                                                                                                                                                                                                                                                                     |             |        |                |                         |               |                     |
| 0247319H                                                                                                                                                                                                                                                                                                                                                                                                                                    | H           | Active | 08/13/2025     | On & Off                | No            | No                  |
| <b>Description from Generator:</b> VCM process area contaminated trench material/sludge                                                                                                                                                                                                                                                                                                                                                     |             |        |                |                         |               |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                                                                                                                                                                                                                    |             |        |                |                         |               |                     |
| <b>EPA Form Code:</b> W319 Other inorganic solids                                                                                                                                                                                                                                                                                                                                                                                           |             |        |                |                         |               |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                                          |             |        |                |                         |               |                     |
| <b>Source Code:</b> G32 Cleanup of spill residues                                                                                                                                                                                                                                                                                                                                                                                           |             |        |                |                         |               |                     |
| <b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing                                                                                                                                                                                                                                                                                                                                                                               |             |        |                |                         |               |                     |
| <b>Company's Internal Code(s):</b> CC0247                                                                                                                                                                                                                                                                                                                                                                                                   |             |        |                |                         |               |                     |
| <b>EPA Hazardous Waste Numbers:</b> D028 K019 K020 U077                                                                                                                                                                                                                                                                                                                                                                                     |             |        |                |                         |               |                     |
| <b>Current Management Units:</b> Container storage area 087 084 022 073 113                                                                                                                                                                                                                                                                                                                                                                 |             |        |                |                         |               |                     |

## 38280

| Texas Waste Code                                                                                                                                                                                                                                                                                                                                                                                                                                | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| 0248219H                                                                                                                                                                                                                                                                                                                                                                                                                                        | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> VCM unit heavy ends are generating during the purification of EDC in the process. The waste is typically piped to the hazardous waste feed tanks and then piped to one of the two on-site incinerators. VCM unit heavy ends can also be managed as a permitted on-site incinerators. VCM unit heavy ends can also be managed as a permitted off-site TSDF. Tank truck or drum packaging could be utilized fo |             |        |                |                         |              |                     |
| 219 Other organic liquids                                                                                                                                                                                                                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> W219 Other organic liquid                                                                                                                                                                                                                                                                                                                                                                                               |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| <b>Origin Code:</b> G24 Solvent or product distillation recovery (sludge, waste)                                                                                                                                                                                                                                                                                                                                                                |             |        |                |                         |              |                     |
| <b>Source Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> CC0248                                                                                                                                                                                                                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b>                                                                                                                                                                                                                                                                                                                                                                                                              |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D001 D019 D021 D022 D027 D028 D029 D032 D033 D034                                                                                                                                                                                                                                                                                                                                                           |             |        |                |                         |              |                     |
| D036 D039 D040 K019 K020                                                                                                                                                                                                                                                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Current Management Units:</b>                                                                                                                                                                                                                                                                                                                                                                                                                |             |        |                |                         |              |                     |
| Container storage area 022                                                                                                                                                                                                                                                                                                                                                                                                                      |             |        |                |                         |              |                     |
| Incinerator 066 065                                                                                                                                                                                                                                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| Tank (surface) 023 082                                                                                                                                                                                                                                                                                                                                                                                                                          |             |        |                |                         |              |                     |
| 0249310H                                                                                                                                                                                                                                                                                                                                                                                                                                        | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Filters contaminated with vinyl chloride monomer, ethylene dichloride, and heavyand light ends; 12/91                                                                                                                                                                                                                                                                                                        |             |        |                |                         |              |                     |
| 310 Spent solid filters or adsorbents                                                                                                                                                                                                                                                                                                                                                                                                           |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> W310 Filters, solid adsorbents, ion exchange resins and spent carbon                                                                                                                                                                                                                                                                                                                                                    |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| <b>Origin Code:</b> G19 Other one-time or intermittent processes                                                                                                                                                                                                                                                                                                                                                                                |             |        |                |                         |              |                     |
| <b>Source Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> CC0249                                                                                                                                                                                                                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b>                                                                                                                                                                                                                                                                                                                                                                                                              |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D043 F025                                                                                                                                                                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 022                                                                                                                                                                                                                                                                                                                                                                                     |             |        |                |                         |              |                     |
| 0250404H                                                                                                                                                                                                                                                                                                                                                                                                                                        | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Spent carbon contaminated with vinyl chloride                                                                                                                                                                                                                                                                                                                                                                |             |        |                |                         |              |                     |
| 404 Spent carbon                                                                                                                                                                                                                                                                                                                                                                                                                                |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> W310 Filters, solid adsorbents, ion exchange resins and spent carbon                                                                                                                                                                                                                                                                                                                                                    |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| <b>Origin Code:</b> G19 Other one-time or intermittent processes                                                                                                                                                                                                                                                                                                                                                                                |             |        |                |                         |              |                     |
| <b>Source Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> CC0250                                                                                                                                                                                                                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b>                                                                                                                                                                                                                                                                                                                                                                                                              |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D028 D043                                                                                                                                                                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 022                                                                                                                                                                                                                                                                                                                                                                                     |             |        |                |                         |              |                     |



## 38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio- active | TCEQ Audit Complete |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|---------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |        |                |                         |               |                     |
| 0251219H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | H           | Active | 08/13/2025     | On & Off                | No            | No                  |
| <b>Description from Generator:</b> VCM Light Ends are generated at the VCM Unit during the purification process. Estimated initial generation date 4Q91.<br><b>Texas Form Code:</b> 219 Other organic liquids<br><b>EPA Form Code:</b> W219 Other organic liquid<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Source Code:</b> G24 Solvent or product distillation recovery (sludge, waste)<br><b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing<br><b>Company's Internal Code(s):</b> CC0251<br><b>EPA Hazardous Waste Numbers:</b> D001<br><b>Current Management Units:</b> Incinerator Tank (surface) D018 D019 D022 D028 D029 D040 F025                                                                                                                                                                                                                                                                                                                                                   |             |        |                |                         |               |                     |
| 02523192                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2           | Active | 08/13/2025     | On & Off                | No            | No                  |
| <b>Description from Generator:</b> Wastewater stripper packing. Packing in wastewater trippers must be periodically replaced. Prior to maintenance activities, column (& packing) is decontaminated by steaming until column tails are <0.5ppm 1,2-dichloroethane. Decontaminated packing 80-100%; miscellaneous (packaging materials from replacement catalyst, protective equipment) 0-20%.<br><b>Texas Form Code:</b> 319 Other waste inorganic solids<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC0252<br><b>Current Management Units:</b> Container storage area 103 068 Miscellaneous storage containers 072                                                                                                                                                                                                                                                                                                                                                                |             |        |                |                         |               |                     |
| 0253306H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | H           | Active | 08/13/2025     | On & Off                | No            | No                  |
| <b>Description from Generator:</b> Limestone sludge is generated during neutralization of HCl generated during incineration of chlorinated organics. The material is dewatered and collected in containers. The stream is designated hazardous due to derived-from rule but meets present treatment standards associated with K019, K020, F025 light ends, F001,F003, F005. Initial date of generation 10/91.<br><b>Texas Form Code:</b> 306 "Dry" lime or metal hydroxide solids not "fixed"<br><b>EPA Form Code:</b> W501 Lime and/or metal hydroxide sludges and solids with no cyanides<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Source Code:</b> G23 Wastewater treatment (sludge, filter cake, etc.)<br><b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing<br><b>Company's Internal Code(s):</b> CC0253<br><b>EPA Hazardous Waste Numbers:</b> F001<br><b>Current Management Units:</b> Container storage area 113 106 087 Tank (surface) 056 050 053 054 058 055 057 F005 K019 K020 |             |        |                |                         |               |                     |
| 02543061                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1           | Active | 08/13/2025     | On & Off                | No            | No                  |
| <b>Description from Generator:</b> Limestone sludge is generated during neutralization of HCl generated during incineration of chlorinated organics. The m<br><b>Texas Form Code:</b> 306 "Dry" lime or metal hydroxide solids not "fixed"<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC0254<br><b>Current Management Units:</b> Container storage area 068 087 106 084 Miscellaneous storage containers 035 072 Tank (surface) 057 054 055 056 058 053 050                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |        |                |                         |               |                     |

## 38280

| Texas Waste Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |        |                |                         |              |                     |
| 0255319H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b><br>Texas Form Code: Rockbox residue generated during clean-out and other maintenance activities required at limestone neutralization equipment (rockbox) in VCM unit. 10/93<br>EPA Form Code: 319 Other waste inorganic solids<br>Origin Code: W319 Other inorganic solids<br>Source Code: 5 Residual from on-site treatment, disposal or recycling of hazardous waste<br>NAICS Code: G19 Other one-time or intermittent processes<br>Company's Internal Code(s): 325199 All Other Basic Organic Chemical Manufacturing<br>EPA Hazardous Waste Numbers: CC0255 F001 F025 K019 K020<br>Current Management Units: Container storage area 087 073 084 068 106<br>Tank (surface) 050 |             |        |                |                         |              |                     |
| 0256319I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | I           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b><br>Texas Form Code: Rockbox residue generated during lean-out and other maintenance activities required at limestone neutralization equipmen<br>Origin Code: 319 Other waste inorganic solids<br>Company's Internal Code(s): 1 Generated on-site from a product process or service activity<br>Current Management Units: CC0256<br>Container storage area 087 068 106 073 084<br>Miscellaneous storage containers 035 072<br>Tank (surface) 050                                                                                                                                                                                                                                  |             |        |                |                         |              |                     |
| 0257306Z                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Z           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b><br>Texas Form Code: Limestone sludge is generated during neutralization of Hcl generated during incineration of chlorinated organics<br>Origin Code: 306 "Dry" lime or metal hydroxide solids not "fixed"<br>Company's Internal Code(s): 1 Generated on-site from a product process or service activity<br>Current Management Units: CC0257<br>Container storage area 107 106 115 087<br>Miscellaneous storage containers 072 035<br>Tank (surface) 058 053 056 054 055 050 057                                                                                                                                                                                                  |             |        |                |                         |              |                     |
| 0258219H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b><br>Texas Form Code: Mother Liquor from direct chlorination reactor in the VCM unit.<br>EPA Form Code: 219 Other organic liquids<br>Origin Code: W219 Other organic liquid<br>Source Code: 1 Generated on-site from a product process or service activity<br>NAICS Code: G24 Solvent or product distillation recovery (sludge, waste)<br>Company's Internal Code(s): 325199 All Other Basic Organic Chemical Manufacturing<br>EPA Hazardous Waste Numbers: CC0258 D001 K020<br>Current Management Units: Container storage area 022 089 068                                                                                                                                       |             |        |                |                         |              |                     |



# Notice of Registration Industrial and Hazardous Waste

| Texas Waste Code                                                                                                                                                                                                                                                                                                    | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                                                                                                           |             |        |                |                         |              |                     |
| 0268409H                                                                                                                                                                                                                                                                                                            | H           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> HE/LE Dike Liner is generated when spent liner is removed/repaired from secondary containment dike of Heavy Ends/Light Ends storage. Waste is listed due to the "mixture" and "derived from" rule in the event that Heavy or Light Ends (K019, K020, F025) ever contacted liner. |             |        |                |                         |              |                     |
| Texas Form Code: 409 Other non-halogenated organic solids                                                                                                                                                                                                                                                           |             |        |                |                         |              |                     |
| EPA Form Code: W409 Other organic solids                                                                                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                         |             |        |                |                         |              |                     |
| Source Code: G19 Other one-time or intermittent processes                                                                                                                                                                                                                                                           |             |        |                |                         |              |                     |
| NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0268                                                                                                                                                                                                                                                                                  |             |        |                |                         |              |                     |
| EPA Hazardous Waste Numbers: F025 K019 K020                                                                                                                                                                                                                                                                         |             |        |                |                         |              |                     |
| Current Management Units: Container storage area 114 068                                                                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| 02704042                                                                                                                                                                                                                                                                                                            | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Spent activated carbon drums generated during maintenance activities. Drums are used as back-up devices in vacuuming activities. Materials vacuumed are steam cleaned before vacuuming.                                                                                          |             |        |                |                         |              |                     |
| Texas Form Code: 404 Spent carbon                                                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                         |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0270                                                                                                                                                                                                                                                                                  |             |        |                |                         |              |                     |
| Current Management Units: Container storage area 068 103                                                                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                                                                                                                                                                                                                |             |        |                |                         |              |                     |
| 02713192                                                                                                                                                                                                                                                                                                            | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Air dryer dessiccant from VCM air compressor generated when it becomes spent & replaced with new dessiccant. Material is used to dry moisture out of compressed air & never comes in contact with VCM process.                                                                   |             |        |                |                         |              |                     |
| Texas Form Code: 319 Other waste inorganic solids                                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                         |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0271                                                                                                                                                                                                                                                                                  |             |        |                |                         |              |                     |
| Current Management Units: Container storage area 103                                                                                                                                                                                                                                                                |             |        |                |                         |              |                     |
| Miscellaneous storage containers 125 072                                                                                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| 0273319H                                                                                                                                                                                                                                                                                                            | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Spent molecular sieve form OHC dryer generated when it becomes spent and is replaced.                                                                                                                                                                                            |             |        |                |                         |              |                     |
| Texas Form Code: 319 Other waste inorganic solids                                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| EPA Form Code: W403 Solid resins, plastics or polymerized organics                                                                                                                                                                                                                                                  |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                         |             |        |                |                         |              |                     |
| Source Code: G13 Cleaning out process equipment                                                                                                                                                                                                                                                                     |             |        |                |                         |              |                     |
| NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0273                                                                                                                                                                                                                                                                                  |             |        |                |                         |              |                     |
| EPA Hazardous Waste Numbers: D028 D043                                                                                                                                                                                                                                                                              |             |        |                |                         |              |                     |
| Current Management Units: Container storage area 113 067 022                                                                                                                                                                                                                                                        |             |        |                |                         |              |                     |

\*\*\* TEXAS COMMISSION ON ENVIRONMENTAL QUALITY \*\*\*  
Notice of Registration  
Industrial and Hazardous Waste

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                           | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                  |             |        |                |                         |              |                     |
| 0275407H                                                                                                                                                                   | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Dewatered sludge generated from the clean-out of the EDC stormwater tank locatedin the VCM plant. The sludge was generated on 09/30/94. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 407 Other halogenated organic solids                                                                                                               |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W409 Other organic solids                                                                                                                            |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                         |             |        |                |                         |              |                     |
| <b>Source Code:</b> G14 Removal of tank sludge, sediments or slag                                                                                                          |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                   |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0275                                                                                                                                  |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> F001 F005 F025 K019 K020                                                                                                               |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 115 084 106 067 073 087                                                                                            |             |        |                |                         |              |                     |
| 0276407H                                                                                                                                                                   | H           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Dewatered solids generated from the cleanout of wastewater tanks and piping.                                                            |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 407 Other halogenated organic solids                                                                                                               |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W409 Other organic solids                                                                                                                            |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                         |             |        |                |                         |              |                     |
| <b>Source Code:</b> G14 Removal of tank sludge, sediments or slag                                                                                                          |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                   |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0276                                                                                                                                  |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> F001 F003 F005 F025 K019 K020                                                                                                          |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 113 107                                                                                                            |             |        |                |                         |              |                     |
| 0277310H                                                                                                                                                                   | H           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Spent Alumina Desiccant - alumina is used to remove moisture and iron from product VCM in C-702.                                        |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 310 Spent solid filters or adsorbents                                                                                                              |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W310 Filters, solid adsorbents, ion exchange resins and spent carbon                                                                                 |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                         |             |        |                |                         |              |                     |
| <b>Source Code:</b> G19 Other one-time or intermittent processes                                                                                                           |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                   |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0277                                                                                                                                  |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> F025                                                                                                                                   |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 087 113                                                                                                            |             |        |                |                         |              |                     |
| 0289303H                                                                                                                                                                   | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Scale from incinerator flue gas caustic wash train. Initial date of generation was 9/19/1996.                                           |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 303 Ash, slag or other residue from incineration of waste                                                                                          |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W303 Ash                                                                                                                                             |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 5 Residual from on-site treatment, disposal or recycling of hazardous waste                                                                            |             |        |                |                         |              |                     |
| <b>Source Code:</b> G25 Hazardous waste managment                                                                                                                          |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                   |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0289                                                                                                                                  |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> F001 F003 F005 F025 K019 K020                                                                                                          |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 113 022                                                                                                            |             |        |                |                         |              |                     |

**\*\*\* TEXAS COMMISSION ON ENVIRONMENTAL QUALITY \*\*\***  
**Notice of Registration**  
**Industrial and Hazardous Waste**

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                    | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio- active | TCEQ Audit Complete |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|---------------|---------------------|
| ***** Active Wastes *****                                                                                                                           |             |        |                |                         |               |                     |
| 02903902                                                                                                                                            | 2           | Active | 08/13/2025     | On & Off                | No            | No                  |
| <b>Description from Generator:</b> nonhaz. construction debris includes concrete,rebar,plywood,soil,plasticinsulation(non-asbestos),steel(pipe,etc) |             |        |                |                         |               |                     |
| <b>Texas Form Code:</b> 390 Nonhazardous concrete/cement/construction debris                                                                        |             |        |                |                         |               |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                  |             |        |                |                         |               |                     |
| <b>Company's Internal Code(s):</b> CC0290                                                                                                           |             |        |                |                         |               |                     |
| <b>Current Management Units:</b> Container storage area 073 103                                                                                     |             |        |                |                         |               |                     |
| Miscellaneous storage containers 072                                                                                                                |             |        |                |                         |               |                     |
| 0292404H                                                                                                                                            | H           | Active | 08/13/2025     | On & Off                | No            | No                  |
| <b>Description from Generator:</b> Spent activated carbon used to remove organics from EDC/VCM wastewater.                                          |             |        |                |                         |               |                     |
| <b>Texas Form Code:</b> 404 Spent carbon                                                                                                            |             |        |                |                         |               |                     |
| <b>EPA Form Code:</b> W310 Filters, solid adsorbents, ion exchange resins and spent carbon                                                          |             |        |                |                         |               |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                  |             |        |                |                         |               |                     |
| <b>Source Code:</b> G23 Wastewater treatment (sludge, filter cake, etc.)                                                                            |             |        |                |                         |               |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                            |             |        |                |                         |               |                     |
| <b>Company's Internal Code(s):</b> CC0292                                                                                                           |             |        |                |                         |               |                     |
| <b>EPA Hazardous Waste Numbers:</b> F001 F003 F005 F025 K019 K020                                                                                   |             |        |                |                         |               |                     |
| <b>Current Management Units:</b> Container storage area 107 068 106 073 087 113                                                                     |             |        |                |                         |               |                     |
| Miscellaneous storage containers 035                                                                                                                |             |        |                |                         |               |                     |
| 0293105H                                                                                                                                            | H           | Active | 08/13/2025     | On-site                 | No            | No                  |
| <b>Description from Generator:</b> Hazardous wastewater at VCM; low pH water due to HCl in stream from incinerators.                                |             |        |                |                         |               |                     |
| <b>Texas Form Code:</b> 105 Acidic aqueous waste                                                                                                    |             |        |                |                         |               |                     |
| <b>EPA Form Code:</b> W105 Acidic aqueous wastes less than 5% acid                                                                                  |             |        |                |                         |               |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                  |             |        |                |                         |               |                     |
| <b>Source Code:</b> G09 Other production or service-related processes                                                                               |             |        |                |                         |               |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                            |             |        |                |                         |               |                     |
| <b>Company's Internal Code(s):</b> CC0293                                                                                                           |             |        |                |                         |               |                     |
| <b>EPA Hazardous Waste Numbers:</b> D002 F001 F003 F005 F025 K019 K020                                                                              |             |        |                |                         |               |                     |
| <b>Current Management Units:</b> Incinerator 065 066                                                                                                |             |        |                |                         |               |                     |
| Sump 064 063                                                                                                                                        |             |        |                |                         |               |                     |
| Tank (surface) 053 050 054                                                                                                                          |             |        |                |                         |               |                     |

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                     | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|--------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                            |             |        |                |                         |              |                     |
| 0294319H                                                                                                                             | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| Description from Generator: Sandfilter Sand                                                                                          |             |        |                |                         |              |                     |
| Texas Form Code: 319 Other waste inorganic solids                                                                                    |             |        |                |                         |              |                     |
| EPA Form Code: W319 Other inorganic solids                                                                                           |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                          |             |        |                |                         |              |                     |
| Source Code: G23 Wastewater treatment (sludge, filter cake, etc.)                                                                    |             |        |                |                         |              |                     |
| NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing                                                                    |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0294                                                                                                   |             |        |                |                         |              |                     |
| EPA Hazardous Waste Numbers: F001 F003 F005 F025 K019 K020                                                                           |             |        |                |                         |              |                     |
| Current Management Units: Container storage area 073 106 113 068 087 107                                                             |             |        |                |                         |              |                     |
| Miscellaneous storage containers 035                                                                                                 |             |        |                |                         |              |                     |
| 0295319H                                                                                                                             | H           | Active | 08/13/2025     | On-site                 | No           | No                  |
| Description from Generator: Spiking solution contaminated solids.                                                                    |             |        |                |                         |              |                     |
| Texas Form Code: 319 Other waste inorganic solids                                                                                    |             |        |                |                         |              |                     |
| EPA Form Code: W002 Contaminated debris: paper, clothing, rags, wood, empty fiber or plastic containers, glass, piping, other solids |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                          |             |        |                |                         |              |                     |
| Source Code: G19 Other one-time or intermittent processes                                                                            |             |        |                |                         |              |                     |
| NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing                                                                    |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0295                                                                                                   |             |        |                |                         |              |                     |
| EPA Hazardous Waste Numbers: D007 D008                                                                                               |             |        |                |                         |              |                     |
| Current Management Units: Container storage area 022                                                                                 |             |        |                |                         |              |                     |
| 0296211                                                                                                                              | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| Description from Generator: Waste polymer generated from wastewater treatment process.                                               |             |        |                |                         |              |                     |
| Texas Form Code: 211 Paint thinner or petroleum distillates                                                                          |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                          |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0296                                                                                                   |             |        |                |                         |              |                     |
| Current Management Units: Container storage area 070 103 113                                                                         |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                                 |             |        |                |                         |              |                     |
| Tank (surface) 059                                                                                                                   |             |        |                |                         |              |                     |
| 02973022                                                                                                                             | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| Description from Generator: Cooling Tower sludge generated from the clean-out of cooling tower basins                                |             |        |                |                         |              |                     |
| Texas Form Code: 302 Soil contaminated with inorganics only                                                                          |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                          |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC-0297                                                                                                  |             |        |                |                         |              |                     |
| Current Management Units: Container storage area 105                                                                                 |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                                 |             |        |                |                         |              |                     |









## Date: 08/14/2025

Date: 08/14/2025



38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                                  | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                                         |             |        |                |                         |              |                     |
| 0471319H                                                                                                                                                                                                                                          | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Chlorine process piping and solids are generated during maintenance activities when solids and/or piping are removed from the process                                                                          |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                          |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W319 Other inorganic solids                                                                                                                                                                                                 |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                |             |        |                |                         |              |                     |
| <b>Source Code:</b> G15 Process equipment change-out or discontinuation of equipment use                                                                                                                                                          |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                          |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0471                                                                                                                                                                                                         |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D019                                                                                                                                                                                                          |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 022 087 113                                                                                                                                                                               |             |        |                |                         |              |                     |
| Miscellaneous storage containers 035                                                                                                                                                                                                              |             |        |                |                         |              |                     |
|                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| 04774032                                                                                                                                                                                                                                          | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Fiberglass reinforced plastic (FRP) cell heads generated from the routine change-out of the cell heads on the chlorine diaphragm cells in the chlorine cell linearea. Initial date of generation was 08/24/94. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 403 Solids resins or polymerized organics                                                                                                                                                                                 |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0477                                                                                                                                                                                                         |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 072                                                                                                                                                                             |             |        |                |                         |              |                     |
|                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| 04903191                                                                                                                                                                                                                                          | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Ceramic saddles from the C/A units generated during maintenance activities                                                                                                                                     |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                          |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0490                                                                                                                                                                                                         |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103 070                                                                                                                                                                                   |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                                                                                                                                              |             |        |                |                         |              |                     |
|                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| 0494110H                                                                                                                                                                                                                                          | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Organic contaminated cell renewal wastewater.                                                                                                                                                                  |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 110 Caustic aqueous waste                                                                                                                                                                                                 |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W110 Caustic aqueous waste without cyanides                                                                                                                                                                                 |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal                                                                                                                                                    |             |        |                |                         |              |                     |
| <b>Source Code:</b> G32 Cleanup of spill residues                                                                                                                                                                                                 |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                          |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0494                                                                                                                                                                                                         |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D002                                                                                                                                                                                                          |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 087                                                                                                                                                                                       |             |        |                |                         |              |                     |
| Miscellaneous storage containers 035 033                                                                                                                                                                                                          |             |        |                |                         |              |                     |
| Sump 008                                                                                                                                                                                                                                          |             |        |                |                         |              |                     |

## 38280

| Texas Waste Code                                                                                                      | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|-----------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                             |             |        |                |                         |              |                     |
| 04955192                                                                                                              | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Clean out of solids from C/A process ponds.                                        |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 519 Other inorganic sludges                                                                   |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                    |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0495                                                                             |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 072                                                 |             |        |                |                         |              |                     |
| Surface impoundment 007                                                                                               |             |        |                |                         |              |                     |
|                                                                                                                       |             |        |                |                         |              |                     |
| 04961101                                                                                                              | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Organic contaminated cell renewal wastewater. Company Waste Description is CC0496. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 110 Caustic aqueous waste                                                                     |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal                        |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0496                                                                             |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 072                                                 |             |        |                |                         |              |                     |
| Sump 008                                                                                                              |             |        |                |                         |              |                     |
|                                                                                                                       |             |        |                |                         |              |                     |
| 0497105H                                                                                                              | H           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Spent Cell renewal dip tank solution                                               |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 105 Acidic aqueous waste                                                                      |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W105 Acidic aqueous wastes less than 5% acid                                                    |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                    |             |        |                |                         |              |                     |
| <b>Source Code:</b> G02 Stripping and acid or caustic cleaning                                                        |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing                                                         |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0497                                                                             |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D002                                                                              |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 100                                                           |             |        |                |                         |              |                     |
|                                                                                                                       |             |        |                |                         |              |                     |
| 0498119H                                                                                                              | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Water generated from wash of the Cl2 Recovery piping                               |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 119 Other inorganic liquids                                                                   |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W101 Very dilute aqueous waste containing more than 99% water                                   |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal                        |             |        |                |                         |              |                     |
| <b>Source Code:</b> G13 Cleaning out process equipment                                                                |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing                                                         |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0498                                                                             |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D007                                                                              |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                 |             |        |                |                         |              |                     |

## 38280

| Texas Waste Code                                                                                                                                                                                                            | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| 05013192                                                                                                                                                                                                                    | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Inlet air housing media from Co-gen unit. Water hardness is deposited on media when water is evaporated.                                                                                 |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                    |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                          |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0501                                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103                                                                                                                                                                 |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                                                                                                                        |             |        |                |                         |              |                     |
| 05023102                                                                                                                                                                                                                    | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> spent Natural Gas Filters                                                                                                                                                                |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 310 Spent solid filters or adsorbents                                                                                                                                                               |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                          |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0502                                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 068 103                                                                                                                                                             |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                                                                                                                        |             |        |                |                         |              |                     |
| 05033192                                                                                                                                                                                                                    | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Ion Exchange Resin                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                    |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                          |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0503                                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 111 103                                                                                                                                                             |             |        |                |                         |              |                     |
| Miscellaneous storage containers 118 120 072                                                                                                                                                                                |             |        |                |                         |              |                     |
| 0504219H                                                                                                                                                                                                                    | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Natural gas used within the Cogen plant has liquids entrained in the gas. Filter/Separators are installed to prevent the liquid from entering the combustion section of the gas turbine. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 219 Other organic liquids                                                                                                                                                                           |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W219 Other organic liquid                                                                                                                                                                             |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                          |             |        |                |                         |              |                     |
| <b>Source Code:</b> G19 Other one-time or intermittent processes                                                                                                                                                            |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 221121 Electric Bulk Power Transmission and Control                                                                                                                                                      |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0504                                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D009 D018                                                                                                                                                                               |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 022                                                                                                                                                                 |             |        |                |                         |              |                     |

## 38280

| Texas Waste Code                                                                                                                                                   | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                          |             |        |                |                         |              |                     |
| 05053071                                                                                                                                                           | 1           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Cogen HRSG tube residue                                                                                                         |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 307 Metal scale, filings or scrap                                                                                                          |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                 |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0505                                                                                                                          |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 110                                                                                                        |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                                                                                               |             |        |                |                         |              |                     |
| 05063161                                                                                                                                                           | 1           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Spent aluminum oxide abrasive is generated when aluminum oxide is used as an abrasive to clean/polish metal equipment or parts. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 316 Other metal salts/chemicals                                                                                                            |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                 |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC 0506                                                                                                                         |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103 112                                                                                                    |             |        |                |                         |              |                     |
| 0507103H                                                                                                                                                           | H           | Active | 08/13/2025     | Off-site                | No           | No                  |
| <b>Description from Generator:</b> Ampoules used for field samples analysis at T&D area, procedure STPL 190 Ammonia in wastewater.                                 |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 103 Spent acid with metals                                                                                                                 |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W001 Lab packs with no acute hazardous waste                                                                                                 |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                 |             |        |                |                         |              |                     |
| <b>Source Code:</b> G22 Laboratory analytical wastes (used chemicals)                                                                                              |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 324110 Petroleum Refineries                                                                                                                     |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC-0507                                                                                                                         |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D002                                                                                                                           |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                              |             |        |                |                         |              |                     |
| 06001131                                                                                                                                                           | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Ethylene commissioning cleaning solution.                                                                                       |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 113 Other aqueous waste with high dissolved solids                                                                                         |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                 |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0600                                                                                                                          |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 122 072 121 123 119                                                                              |             |        |                |                         |              |                     |



OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                     | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|--------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                            |             |        |                |                         |              |                     |
| 0601201H                                                                                                                             | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| Description from Generator: Methanol & Water                                                                                         |             |        |                |                         |              |                     |
| Texas Form Code: 201 Concentrated solvent-water solution                                                                             |             |        |                |                         |              |                     |
| EPA Form Code: W203 Concentrated non-halogenated (e.g., non-chlorinated) solvent                                                     |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                          |             |        |                |                         |              |                     |
| Source Code: G09 Other production or service-related processes                                                                       |             |        |                |                         |              |                     |
| NAICS Code: 325110 Petrochemical Manufacturing                                                                                       |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0601                                                                                                   |             |        |                |                         |              |                     |
| EPA Hazardous Waste Numbers: D001 F003                                                                                               |             |        |                |                         |              |                     |
| Current Management Units: Container storage area 067 022 113                                                                         |             |        |                |                         |              |                     |
| Miscellaneous storage containers 126 131 125                                                                                         |             |        |                |                         |              |                     |
| 0602310I                                                                                                                             | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| Description from Generator: V-4240 Spent Filters and Coalescers                                                                      |             |        |                |                         |              |                     |
| Texas Form Code: 310 Spent solid filters or adsorbents                                                                               |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                          |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0602                                                                                                   |             |        |                |                         |              |                     |
| Current Management Units: Miscellaneous storage containers 118 072 125 120 130                                                       |             |        |                |                         |              |                     |
| 0603003H                                                                                                                             | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| Description from Generator: Ethylene Lab Pygas                                                                                       |             |        |                |                         |              |                     |
| Texas Form Code: 003 Mixed lab packs                                                                                                 |             |        |                |                         |              |                     |
| EPA Form Code: W002 Contaminated debris: paper, clothing, rags, wood, empty fiber or plastic containers, glass, piping, other solids |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                          |             |        |                |                         |              |                     |
| Source Code: G22 Laboratory analytical wastes (used chemicals)                                                                       |             |        |                |                         |              |                     |
| NAICS Code: 325110 Petrochemical Manufacturing                                                                                       |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0603                                                                                                   |             |        |                |                         |              |                     |
| EPA Hazardous Waste Numbers: D001 D018                                                                                               |             |        |                |                         |              |                     |
| Current Management Units: Container storage area 022                                                                                 |             |        |                |                         |              |                     |
| 0604388H                                                                                                                             | H           | Active | 08/13/2025     | On-site                 | No           | No                  |
| Description from Generator: Glass vials, wipes, and plastic used for sampling py gas and wipe down after testing is complete.        |             |        |                |                         |              |                     |
| Texas Form Code: 388 Empty or crushed glass containers                                                                               |             |        |                |                         |              |                     |
| EPA Form Code: W319 Other inorganic solids                                                                                           |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                          |             |        |                |                         |              |                     |
| Source Code: G22 Laboratory analytical wastes (used chemicals)                                                                       |             |        |                |                         |              |                     |
| NAICS Code: 325110 Petrochemical Manufacturing                                                                                       |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0604                                                                                                   |             |        |                |                         |              |                     |
| EPA Hazardous Waste Numbers: D001 D018                                                                                               |             |        |                |                         |              |                     |
| Current Management Units: Container storage area 022                                                                                 |             |        |                |                         |              |                     |





38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| 0613319H                                                                                                                                                                                                                        | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Water and contaminants that filtered from the plant rain water trenches, water and oil from the water draw off from the gasoline and oil tanks and process water from the Saturator blowdown |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W319 Other inorganic solids                                                                                                                                                                               |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Source Code:</b> G14 Removal of tank sludge, sediments or slag                                                                                                                                                               |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 324110 Petroleum Refineries                                                                                                                                                                                  |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0613                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D018                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 113 067 022                                                                                                                                                             |             |        |                |                         |              |                     |
| Miscellaneous storage containers 118 125                                                                                                                                                                                        |             |        |                |                         |              |                     |
| 0614304I                                                                                                                                                                                                                        | I           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Coke from inside ethane cracking furnace coils that had spalled off and was collected in coke catcher during normal operations, and contains moisture.                                       |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 304 Other "dry" ash, slag or thermal residue                                                                                                                                                            |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0614                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 118 120                                                                                                                                                       |             |        |                |                         |              |                     |
| 0615206H                                                                                                                                                                                                                        | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> New unused wash oil that was recovered while off loading into the wash oil tank.                                                                                                             |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 206 Waste oil                                                                                                                                                                                           |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W206 Waste oil                                                                                                                                                                                            |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Source Code:</b> G11 Discarding off-specification or out-of-date chemicals or products                                                                                                                                       |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 324110 Petroleum Refineries                                                                                                                                                                                  |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0615                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> U165                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 113 022 067                                                                                                                                                             |             |        |                |                         |              |                     |
| Miscellaneous storage containers 125                                                                                                                                                                                            |             |        |                |                         |              |                     |
| 06163192                                                                                                                                                                                                                        | 2           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> The waste is generated after steam cleaning and hydro blasting the debutanizer reboiler A&B.                                                                                                 |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0616                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 125                                                                                                                                                           |             |        |                |                         |              |                     |

# Notice of Registration Industrial and Hazardous Waste

| Texas Waste Code                                                                                                                                                                                                                                | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| 0617219H                                                                                                                                                                                                                                        | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Waste is from Ethylene Caustic Tanks where caustic is used to scrub out sulfides after furnace cracking.                                                                                                     |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 219 Other organic liquids                                                                                                                                                                                               |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W219 Other organic liquid                                                                                                                                                                                                 |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Source Code:</b> G14 Removal of tank sludge, sediments or slag                                                                                                                                                                               |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 324110 Petroleum Refineries                                                                                                                                                                                                  |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0617                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D002 D018                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 125                                                                                                                                                                           |             |        |                |                         |              |                     |
| 0618319I                                                                                                                                                                                                                                        | 1           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Waste is generated by reacting spent caustic with steam and air to a state that effluent can be treated easily at bio treater. Prior to shutting unit down, reactor is flushed clean with boiler feed water. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0618                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 125                                                                                                                                                                           |             |        |                |                         |              |                     |
| 0619489H                                                                                                                                                                                                                                        | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> PPE and Rags used to clean drums and equipment while unused wash oil is recovered during off loading into the wash oil tank.                                                                                 |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 489 Petroleum contaminated solids                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>EPA Form Code:</b> W206 Waste oil                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Source Code:</b> G11 Discarding off-specification or out-of-date chemicals or products                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>NAICS Code:</b> 324110 Petroleum Refineries                                                                                                                                                                                                  |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0619                                                                                                                                                                                                       |             |        |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> U165                                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 125                                                                                                                                                                           |             |        |                |                         |              |                     |
| 06203192                                                                                                                                                                                                                                        | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Refractory removed from Ethylene thermal oxidizers during maintenance or clean-outs for repairs.                                                                                                             |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                        |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                              |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC-0620                                                                                                                                                                                                      |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 125 121                                                                                                                                                                       |             |        |                |                         |              |                     |

## 38280

| Texas Waste | Waste Class | Date of Status | Managed Onsite/ | Radioactive | TCEQ Audit Complete |
|-------------|-------------|----------------|-----------------|-------------|---------------------|
|             |             |                |                 |             |                     |

\*\*\*\*\*  
**Active Wastes**  
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|                                                                |   |        |            |          |    |    |
|----------------------------------------------------------------|---|--------|------------|----------|----|----|
| 06213192                                                       | 2 | Active | 08/13/2025 | On & Off | No | No |
| <b>Description from Generator:</b>                             |   |        |            |          |    |    |
| Insulation that was contaminated in the P3 binary area.        |   |        |            |          |    |    |
| <b>Texas Form Code:</b>                                        |   |        |            |          |    |    |
| 319 Other waste inorganic solids                               |   |        |            |          |    |    |
| <b>Origin Code:</b>                                            |   |        |            |          |    |    |
| 1 Generated on-site from a product process or service activity |   |        |            |          |    |    |
| <b>Company's Internal Code(s):</b>                             |   |        |            |          |    |    |
| CC-0621                                                        |   |        |            |          |    |    |
| <b>Current Management Units:</b>                               |   |        |            |          |    |    |
| Miscellaneous storage containers                               |   |        |            |          |    |    |
| 125                                                            |   |        |            |          |    |    |

|                                    |   |        |                                                                                                  |          |    |    |
|------------------------------------|---|--------|--------------------------------------------------------------------------------------------------|----------|----|----|
| 06223191                           | 1 | Active | 08/13/2025                                                                                       | On & Off | No | No |
| <b>Description from Generator:</b> |   |        |                                                                                                  |          |    |    |
| <b>Texas Form Code:</b>            |   |        | Prior to shutting unit down, caustic tanks are drained and flushed clean with boiler feed water. |          |    |    |
| 319                                |   |        | Other waste inorganic solids                                                                     |          |    |    |
| <b>Origin Code:</b>                |   |        | 1 Generated on-site from a product process or service activity                                   |          |    |    |
| <b>Company's Internal Code(s):</b> |   |        | CC0622                                                                                           |          |    |    |
| <b>Current Management Units:</b>   |   |        | Miscellaneous storage containers                                                                 |          |    |    |
|                                    |   |        | 072 125                                                                                          |          |    |    |

|                                                                                                                             |   |        |            |                                  |     |    |
|-----------------------------------------------------------------------------------------------------------------------------|---|--------|------------|----------------------------------|-----|----|
| 06233931                                                                                                                    | 1 | Active | 08/13/2025 | On & Off                         | No  | No |
| <b>Description from Generator:</b> SCR removed from Ethylene and VCM furnaces during maintenance or clean-outs for repairs. |   |        |            |                                  |     |    |
| <b>Texas Form Code:</b> 393 Catalyst waste                                                                                  |   |        |            |                                  |     |    |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                          |   |        |            |                                  |     |    |
| <b>Company's Internal Code(s):</b> CC0623                                                                                   |   |        |            |                                  |     |    |
| <b>Current Management Units:</b>                                                                                            |   |        |            |                                  |     |    |
|                                                                                                                             |   |        |            | Container storage area           | 087 |    |
|                                                                                                                             |   |        |            | Miscellaneous storage containers | 118 |    |

|                                                                                                                              |   |        |                                                                |          |    |         |
|------------------------------------------------------------------------------------------------------------------------------|---|--------|----------------------------------------------------------------|----------|----|---------|
| 06243102                                                                                                                     | 2 | Active | 08/13/2025                                                     | On & Off | No | No      |
| <b>Description from Generator:</b> MOLSIVE/DENSTONE WAS USED IN C-4281 A&B DRYERS TO REMOVE RESIDUAL MOISTURE FROM ETHYLENE. |   |        |                                                                |          |    |         |
| <b>Texas Form Code:</b>                                                                                                      |   |        | 310 Spent solid filters or adsorbents                          |          |    |         |
| <b>Origin Code:</b>                                                                                                          |   |        | 1 Generated on-site from a product process or service activity |          |    |         |
| <b>Company's Internal Code(s):</b>                                                                                           |   |        | CC0624                                                         |          |    |         |
| <b>Current Management Units:</b>                                                                                             |   |        | Miscellaneous storage containers                               |          |    | 125 130 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |   |        |            |          |    |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|--------|------------|----------|----|----|
| 06253102                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2 | Active | 08/13/2025 | On & Off | No | No |
| <b>Description from Generator:</b> The molsive/denstone was used in C-4335 Ethylene Dryer to remove residual moisture from ethylene. Dryers were steamed cleaned prior to opening.<br><b>Texas Form Code:</b> 310 Spent solid filters or adsorbents<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC0625<br><b>Current Management Units:</b> Miscellaneous storage containers 130 |   |        |            |          |    |    |

OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                                                                                                                                     | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| 06263192                                                                                                                                                                                                                                                                                                                                             | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> The packing from C-4210 Ethane Feed Saturator was removed from equipment during maintenance/shutdown work and replaced. Equipment and packing were steamed cleaned prior to opening of equipment.                                                                                                                 |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0626                                                                                                                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 118 130                                                                                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| 06273192                                                                                                                                                                                                                                                                                                                                             | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> The packing from C-4320 Deethanizer was removed from equipment during maintenance/shutdown work and replaced. Equipment and packing were steamed cleaned prior to opening of equipment.                                                                                                                           |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0627                                                                                                                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 118 130                                                                                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| 06283192                                                                                                                                                                                                                                                                                                                                             | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Solids that were generated during hydro blasting and clean out of equipment that contained NORM. This includes secondary containment, rust, scale PPE and equipment (piping, nuts, bolts. This is also secondary containment used in removal of packing that contained NORM. This includes PPE used in the field. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0628                                                                                                                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 132 133                                                                                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| 06293192                                                                                                                                                                                                                                                                                                                                             | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> The packing from C-4270 Caustic/Water Wash Tower was removed from equipment during maintenance/shutdown work and replaced. Equipment and packing were steamed cleaned prior to opening equipment.                                                                                                                 |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0629                                                                                                                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 130                                                                                                                                                                                                                                                                                |             |        |                |                         |              |                     |
| 06303192                                                                                                                                                                                                                                                                                                                                             | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> The packing from C-4452 was removed from equipment during maintenance/shutdown work and replaced. Equipment and packing were steamed cleaned prior to opening.                                                                                                                                                    |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                                                                                                                             |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                                   |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0630                                                                                                                                                                                                                                                                                                            |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 130                                                                                                                                                                                                                                                                                |             |        |                |                         |              |                     |

## Industrial and Hazardous Waste

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**Active Wastes**  
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## OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                             | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                    |             |        |                |                         |              |                     |
| 07033101                                                                                                                                                     | 1           | Active | 08/13/2025     | Off-site                | No           | No                  |
| <b>Description from Generator:</b> Waste was generated on 9/19/2018. The molsiv was used in dryers C-9160 A and B to remove residual moisture from Ethylene. |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 310 Spent solid filters or adsorbents                                                                                                |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal                                                               |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC-0703                                                                                                                   |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                        |             |        |                |                         |              |                     |
| 07044041                                                                                                                                                     | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Ethylene Activated Carbon                                                                                                 |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 404 Spent carbon                                                                                                                     |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                           |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC-0704                                                                                                                   |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 072                                                                                        |             |        |                |                         |              |                     |
| 07051131                                                                                                                                                     | 1           | Active | 08/13/2025     | Off-site                | No           | No                  |
| <b>Description from Generator:</b> Water used to flush through the Markham C-9160 A and B dryers                                                             |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 113 Other aqueous waste with high dissolved solids                                                                                   |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                           |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC-0705                                                                                                                   |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                        |             |        |                |                         |              |                     |
| 07061132                                                                                                                                                     | 2           | Active | 08/13/2025     | Off-site                | No           | No                  |
| <b>Description from Generator:</b> Waste was generated from a process regeneration.                                                                          |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 113 Other aqueous waste with high dissolved solids                                                                                   |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                           |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC-0706                                                                                                                   |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                        |             |        |                |                         |              |                     |
| 08002071                                                                                                                                                     | 1           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Waste is biocide used during commission.                                                                                  |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 207 Concentrated aqueous solution of other organics                                                                                  |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                           |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC-0800                                                                                                                   |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 125                                                                                        |             |        |                |                         |              |                     |
| 08012011                                                                                                                                                     | 1           | Active | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Waste name is PC-45.                                                                                                      |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 201 Concentrated solvent-water solution                                                                                              |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                           |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC-801                                                                                                                    |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 125                                                                                        |             |        |                |                         |              |                     |

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                          | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                                                                                                                                                 |             |        |                |                         |              |                     |
| 08022011                                                                                                                                                                                                                  | 1           | Active | 08/13/2025     | On-site                 | No           | No                  |
| Description from Generator: Waste Name is CW-1007.                                                                                                                                                                        |             |        |                |                         |              |                     |
| Texas Form Code: 201 Concentrated solvent-water solution                                                                                                                                                                  |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                                                                                               |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC-802                                                                                                                                                                                        |             |        |                |                         |              |                     |
| Current Management Units: Miscellaneous storage containers 125                                                                                                                                                            |             |        |                |                         |              |                     |
| 08033192                                                                                                                                                                                                                  | 2           | Active | 08/13/2025     | On-site                 | No           | No                  |
| Description from Generator: New Unused refractory mortar.                                                                                                                                                                 |             |        |                |                         |              |                     |
| Texas Form Code: 319 Other waste inorganic solids                                                                                                                                                                         |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                                                                                               |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0803                                                                                                                                                                                        |             |        |                |                         |              |                     |
| Current Management Units: Miscellaneous storage containers 125                                                                                                                                                            |             |        |                |                         |              |                     |
| 0804201H                                                                                                                                                                                                                  | H           | Active | 08/13/2025     | On & Off                | No           | No                  |
| Description from Generator: One Time Shipment: Waste was generated when Nalco tote failed at the valve and leaked into secondary containment during a rain event. Was cleaned up with Petroclean and placed back in tote. |             |        |                |                         |              |                     |
| Texas Form Code: 201 Concentrated solvent-water solution                                                                                                                                                                  |             |        |                |                         |              |                     |
| EPA Form Code: W219 Other organic liquid                                                                                                                                                                                  |             |        |                |                         |              |                     |
| Origin Code: 2 Result of spill clean-up, equipment decommissioning or emergency removal                                                                                                                                   |             |        |                |                         |              |                     |
| Source Code: G11 Discarding off-specification or out-of-date chemicals or products                                                                                                                                        |             |        |                |                         |              |                     |
| NAICS Code: 324110 Petroleum Refineries                                                                                                                                                                                   |             |        |                |                         |              |                     |
| Company's Internal Code(s): CONT NALCO PROD                                                                                                                                                                               |             |        |                |                         |              |                     |
| EPA Hazardous Waste Numbers: D001                                                                                                                                                                                         |             |        |                |                         |              |                     |
| Current Management Units: Miscellaneous storage containers 125                                                                                                                                                            |             |        |                |                         |              |                     |
| 0805119H                                                                                                                                                                                                                  | H           | Active | 08/13/2025     | Off-site                | No           | No                  |
| Description from Generator: One time Shipment: Out-dated chemicals.                                                                                                                                                       |             |        |                |                         |              |                     |
| Texas Form Code: 119 Other inorganic liquids                                                                                                                                                                              |             |        |                |                         |              |                     |
| EPA Form Code: W119 Other inorganic liquid                                                                                                                                                                                |             |        |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                                                                                               |             |        |                |                         |              |                     |
| Source Code: G11 Discarding off-specification or out-of-date chemicals or products                                                                                                                                        |             |        |                |                         |              |                     |
| NAICS Code: 325110 Petrochemical Manufacturing                                                                                                                                                                            |             |        |                |                         |              |                     |
| Company's Internal Code(s): CC0805                                                                                                                                                                                        |             |        |                |                         |              |                     |
| EPA Hazardous Waste Numbers: D036 U169                                                                                                                                                                                    |             |        |                |                         |              |                     |
| Current Management Units: None                                                                                                                                                                                            |             |        |                |                         |              |                     |

\*\*\* TEXAS COMMISSION ON ENVIRONMENTAL QUALITY \*\*\*  
Notice of Registration  
Industrial and Hazardous Waste

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                               | Waste Class | Status | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|------------------------------------------------------------------------------------------------|-------------|--------|----------------|-------------------------|--------------|---------------------|
| ***** Active Wastes *****                                                                      |             |        |                |                         |              |                     |
| 08061191                                                                                       | 1           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Old unused product in unlabeled drums.                      |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 119 Other inorganic liquids                                            |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity             |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0806                                                      |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103                                    |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                           |             |        |                |                         |              |                     |
| 08074062                                                                                       | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Cut up decontaminated totes.                                |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 406 Empty fiber or plastic containers                                  |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity             |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0807                                                      |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Container storage area 103                                    |             |        |                |                         |              |                     |
| Miscellaneous storage containers 072                                                           |             |        |                |                         |              |                     |
| 94501992                                                                                       | 2           | Active | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Brine/ Sodium Nitrite. Waste generated on 9/21/2017.        |             |        |                |                         |              |                     |
| <b>Texas Form Code:</b> 199 Brine solution that could also bear the form code 113              |             |        |                |                         |              |                     |
| <b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal |             |        |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC9450                                                      |             |        |                |                         |              |                     |
| <b>Current Management Units:</b> Miscellaneous storage containers 072                          |             |        |                |                         |              |                     |

As of 08/13/2025, The next unassigned sequence number for WASTES is 9451

| Texas Waste Code                                                                                                                                                                                                                                                                              | Waste Class | Status   | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|----------------|-------------------------|--------------|---------------------|
| <b>** No Longer Generated Wastes **</b>                                                                                                                                                                                                                                                       |             |          |                |                         |              |                     |
| 01013892                                                                                                                                                                                                                                                                                      | 2           | Inactive | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Sand blast sand<br><b>Texas Form Code:</b> 389 Nonhazardous sandblasting waste<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC0101<br><b>Current Management Units:</b> None |             |          |                |                         |              |                     |

**\*\* No Longer Generated Wastes \*\***

|          |   |          |            |          |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------|---|----------|------------|----------|----|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 01013892 | 2 | Inactive | 08/13/2025 | On-site  | No | No | <b>Description from Generator:</b> Sand blast sand<br><b>Texas Form Code:</b> 389 Nonhazardous sandblasting waste<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC0101<br><b>Current Management Units:</b> None                                                                                                                                                                                                                                  |
| 01039032 | 2 | Inactive | 08/13/2025 | On & Off | No | No | <b>Description from Generator:</b> Plant office refuse from administration building and from offices of engineers,drafters, secretaries, and other clerical workers. This includes paper, cardboard, office supply containers/packagings, food packagings, and food wastes. Initial generation 1987.<br><b>Texas Form Code:</b> 903<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> Plant Office Refuse<br><b>Current Management Units:</b> None   |
| 01059012 | 2 | Inactive | 08/13/2025 | On & Off | No | No | <b>Description from Generator:</b> Plant production refuse from production of chlorine, caustic soda, ethylene dichloride, and vinyl chloride monomer. Initial generation 1987. This includes paper, scrap wood, scrap steel, empty containers, linings, food packaging, food wastes.<br><b>Texas Form Code:</b> 901<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> Plant Production Refuse (CC005, 105)<br><b>Current Management Units:</b> None |
| 01113902 | 2 | Inactive | 08/13/2025 | On & Off | No | No | <b>Description from Generator:</b> Miscellaneous construction debris will be generated due to improvements and/or repairs to existing plant production areas and plant office areas. Estimated initial date of generation 1988.<br><b>Texas Form Code:</b> 390 Nonhazardous concrete/cement/construction debris<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> Miscellaneous Construction Debris<br><b>Current Management Units:</b> None         |
| 01833102 | 2 | Inactive | 08/13/2025 | On & Off | No | No | <b>Description from Generator:</b> Metal filters used in various process applications that are uncontaminated; 9/93<br><b>Texas Form Code:</b> 310 Spent solid filters or adsorbents<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> 01833102<br><b>Current Management Units:</b> None                                                                                                                                                             |

OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                                                                          | Waste Class | Status   | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|----------------|-------------------------|--------------|---------------------|
| ** No Longer Generated Wastes **                                                                                                                                                                                                                                                          |             |          |                |                         |              |                     |
| 0199404H                                                                                                                                                                                                                                                                                  | H           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Spent carbon contaminated with 1,2-Dichloroethane; Due to waste minimization, ingredient changes or process changes this waste is no longer generated.                                                                                                 |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 404 Spent carbon                                                                                                                                                                                                                                                  |             |          |                |                         |              |                     |
| <b>EPA Form Code:</b> W310 Filters, solid adsorbents, ion exchange resins and spent carbon                                                                                                                                                                                                |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                        |             |          |                |                         |              |                     |
| <b>Source Code:</b> G19 Other one-time or intermittent processes                                                                                                                                                                                                                          |             |          |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                  |             |          |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0199                                                                                                                                                                                                                                                 |             |          |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D028 U077                                                                                                                                                                                                                                             |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                                                     |             |          |                |                         |              |                     |
| 0265404H                                                                                                                                                                                                                                                                                  | H           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Spent carbon, contaminated with ethylene dichloride.                                                                                                                                                                                                   |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 404 Spent carbon                                                                                                                                                                                                                                                  |             |          |                |                         |              |                     |
| <b>EPA Form Code:</b> W310 Filters, solid adsorbents, ion exchange resins and spent carbon                                                                                                                                                                                                |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                        |             |          |                |                         |              |                     |
| <b>Source Code:</b> G21 Air pollution control devices (baghouse dust, etc.)                                                                                                                                                                                                               |             |          |                |                         |              |                     |
| <b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing                                                                                                                                                                                                                             |             |          |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> Spent carbon, EDC contaminated                                                                                                                                                                                                                         |             |          |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D028                                                                                                                                                                                                                                                  |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                                                     |             |          |                |                         |              |                     |
| 02723192                                                                                                                                                                                                                                                                                  | 2           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Spent molecular sieve from OHC dryer generated when it becomes spent & is replaced. Material is used to dry plant air system at VCM unit & never comes in contact with process.; A new hazardous waste determination has been performed on this waste. |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                                                                  |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                        |             |          |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0272                                                                                                                                                                                                                                                 |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                                                     |             |          |                |                         |              |                     |
| 02863902                                                                                                                                                                                                                                                                                  | 2           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Nonhaz. construction debris includes concrete, rebar, plywood, soil, steel/plastic                                                                                                                                                                     |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 390 Nonhazardous concrete/cement/construction debris                                                                                                                                                                                                              |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                        |             |          |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> 02863902                                                                                                                                                                                                                                               |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                                                     |             |          |                |                         |              |                     |

# Notice of Registration Industrial and Hazardous Waste

| Texas Waste Code                                                                                                                                                                                                                                                                                                                       | Waste Class | Status   | Date of Status | Managed Onsite/ Offsite | Radio-active | TCE/Q Audit Complete |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|----------------|-------------------------|--------------|----------------------|
| ** No Longer Generated Wastes **                                                                                                                                                                                                                                                                                                       |             |          |                |                         |              |                      |
| 0291407H                                                                                                                                                                                                                                                                                                                               | H           | Inactive | 08/13/2025     | No                      | No           | No                   |
| <b>Description from Generator:</b> INACTIVE- THIS WASTE CODE WAS ENTERED IN ERROR AND IS A DUPLICATE OF 0267407H. Incinerator Absorber Solids are generated during maintenance or clean-out of incinerator acid absorber system.; Initial waste code determination used in incorrect form and/or classification code or other mistake. |             |          |                |                         |              |                      |
| Texas Form Code: 407 Other halogenated organic solids                                                                                                                                                                                                                                                                                  |             |          |                |                         |              |                      |
| EPA Form Code: W409 Other organic solids                                                                                                                                                                                                                                                                                               |             |          |                |                         |              |                      |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                            |             |          |                |                         |              |                      |
| Source Code: G19 Other one-time or intermittent processes                                                                                                                                                                                                                                                                              |             |          |                |                         |              |                      |
| NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                                                                      |             |          |                |                         |              |                      |
| Company's Internal Code(s): CC0291                                                                                                                                                                                                                                                                                                     |             |          |                |                         |              |                      |
| EPA Hazardous Waste Numbers:                                                                                                                                                                                                                                                                                                           | F001        | F003     | F005           | F025                    | K019         | K020                 |
| Current Management Units: None                                                                                                                                                                                                                                                                                                         |             |          |                |                         |              |                      |
| 0303404H                                                                                                                                                                                                                                                                                                                               | H           | Inactive | 08/13/2025     | On & Off                | No           | No                   |
| <b>Description from Generator:</b> contaminated spent carbon generated from EDC tank cleanouts; Due to waste minimization, ingredient changes or process changes this waste is no longer generated.                                                                                                                                    |             |          |                |                         |              |                      |
| Texas Form Code: 404 Spent carbon                                                                                                                                                                                                                                                                                                      |             |          |                |                         |              |                      |
| EPA Form Code: W310 Filters, solid adsorbents, ion exchange resins and spent carbon                                                                                                                                                                                                                                                    |             |          |                |                         |              |                      |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                            |             |          |                |                         |              |                      |
| Source Code: G13 Cleaning out process equipment                                                                                                                                                                                                                                                                                        |             |          |                |                         |              |                      |
| NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                                                                                      |             |          |                |                         |              |                      |
| Company's Internal Code(s): SPENT CARBON                                                                                                                                                                                                                                                                                               |             |          |                |                         |              |                      |
| EPA Hazardous Waste Numbers:                                                                                                                                                                                                                                                                                                           | D028        | K019     |                |                         |              |                      |
| Current Management Units: None                                                                                                                                                                                                                                                                                                         |             |          |                |                         |              |                      |
| 0424310H                                                                                                                                                                                                                                                                                                                               | H           | Inactive | 08/13/2025     | On & Off                | No           | No                   |
| <b>Description from Generator:</b> Contaminated plant waste generated from activities in the chlorine recovery area; 1990; One time shipment.                                                                                                                                                                                          |             |          |                |                         |              |                      |
| Texas Form Code: 310 Spent solid filters or adsorbents                                                                                                                                                                                                                                                                                 |             |          |                |                         |              |                      |
| EPA Form Code: W310 Filters, solid adsorbents, ion exchange resins and spent carbon                                                                                                                                                                                                                                                    |             |          |                |                         |              |                      |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                            |             |          |                |                         |              |                      |
| Source Code: G19 Other one-time or intermittent processes                                                                                                                                                                                                                                                                              |             |          |                |                         |              |                      |
| NAICS Code: 325181 Alkalies and Chlorine Manufacturing                                                                                                                                                                                                                                                                                 |             |          |                |                         |              |                      |
| Company's Internal Code(s): CC0424                                                                                                                                                                                                                                                                                                     |             |          |                |                         |              |                      |
| EPA Hazardous Waste Numbers:                                                                                                                                                                                                                                                                                                           | D019        |          |                |                         |              |                      |
| Current Management Units: None                                                                                                                                                                                                                                                                                                         |             |          |                |                         |              |                      |
| 0450110H                                                                                                                                                                                                                                                                                                                               | H           | Inactive | 08/13/2025     | On & Off                | No           | No                   |
| <b>Description from Generator:</b> C/A wastewater from the chlorine-caustic process areas and stormwater. The waste stream may be characteristically hazardous because the pH may be greater than 12.5 (or less than 2 or infrequent basis). Estimated initial generation 1988.                                                        |             |          |                |                         |              |                      |
| Texas Form Code: 110 Caustic aqueous waste                                                                                                                                                                                                                                                                                             |             |          |                |                         |              |                      |
| EPA Form Code: W110 Caustic aqueous waste without cyanides                                                                                                                                                                                                                                                                             |             |          |                |                         |              |                      |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                                                                                                                                                                                                            |             |          |                |                         |              |                      |
| Source Code: G07 Product and by-product processing                                                                                                                                                                                                                                                                                     |             |          |                |                         |              |                      |
| NAICS Code: 325181 Alkalies and Chlorine Manufacturing                                                                                                                                                                                                                                                                                 |             |          |                |                         |              |                      |
| Company's Internal Code(s): C/A Wastewater (450)                                                                                                                                                                                                                                                                                       |             |          |                |                         |              |                      |
| EPA Hazardous Waste Numbers:                                                                                                                                                                                                                                                                                                           | D002        |          |                |                         |              |                      |
| Current Management Units: None                                                                                                                                                                                                                                                                                                         |             |          |                |                         |              |                      |



## Industrial and Hazardous Waste

| Texas Waste Code                                                                                                                                                                                                                                                                      | Waste Class | Status   | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|----------------|-------------------------|--------------|---------------------|
| ** No Longer Generated Wastes **                                                                                                                                                                                                                                                      |             |          |                |                         |              |                     |
| 0460319H                                                                                                                                                                                                                                                                              | H           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Alkali contaminated solids generated from maintenance activities; Initial waste code determination used in incorrect form and/or classification code or other mistake.                                                                             |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                                                              |             |          |                |                         |              |                     |
| <b>EPA Form Code:</b> W319 Other inorganic solids                                                                                                                                                                                                                                     |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                    |             |          |                |                         |              |                     |
| <b>Source Code:</b> G25 Hazardous waste management                                                                                                                                                                                                                                    |             |          |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                              |             |          |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0460                                                                                                                                                                                                                                             |             |          |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D002                                                                                                                                                                                                                                              |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                                                 |             |          |                |                         |              |                     |
| 0478110H                                                                                                                                                                                                                                                                              | H           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Caustic aqueous waste containing petroleum products. Generated by the mixture of aqueous caustic material with petroleum materials in a contractor's unclean vacuum truck. Date of initial generation was April 19, 1995.                          |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 110 Caustic aqueous waste                                                                                                                                                                                                                                     |             |          |                |                         |              |                     |
| <b>EPA Form Code:</b> W110 Caustic aqueous waste without cyanides                                                                                                                                                                                                                     |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                    |             |          |                |                         |              |                     |
| <b>Source Code:</b> G19 Other one-time or intermittent processes                                                                                                                                                                                                                      |             |          |                |                         |              |                     |
| <b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing                                                                                                                                                                                                                         |             |          |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D002                                                                                                                                                                                                                                              |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                                                 |             |          |                |                         |              |                     |
| 0479105H                                                                                                                                                                                                                                                                              | H           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Spent Phosphoric Acid Aqueous Waste from the painting process at the transformers in the Chlor / Alkali Plant. Date of initial generation was July 10, 1995.; Solid waste registration number and facility have temporarily ceased IHW activities. |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 105 Acidic aqueous waste                                                                                                                                                                                                                                      |             |          |                |                         |              |                     |
| <b>EPA Form Code:</b> W105 Acidic aqueous wastes less than 5% acid                                                                                                                                                                                                                    |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                    |             |          |                |                         |              |                     |
| <b>Source Code:</b> G06 Painting and coating                                                                                                                                                                                                                                          |             |          |                |                         |              |                     |
| <b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing                                                                                                                                                                                                                         |             |          |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0479                                                                                                                                                                                                                                             |             |          |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D002                                                                                                                                                                                                                                              |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                                                 |             |          |                |                         |              |                     |
| 0481407H                                                                                                                                                                                                                                                                              | H           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Suction chiller reboiler replaced during turnaround contaminated with 70% Hexachloroethane (D034).; One time shipment.                                                                                                                             |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 407 Other halogenated organic solids                                                                                                                                                                                                                          |             |          |                |                         |              |                     |
| <b>EPA Form Code:</b> W409 Other organic solids                                                                                                                                                                                                                                       |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                                                    |             |          |                |                         |              |                     |
| <b>Source Code:</b> G15 Process equipment change-out or discontinuation of equipment use                                                                                                                                                                                              |             |          |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                                              |             |          |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0481                                                                                                                                                                                                                                             |             |          |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D034                                                                                                                                                                                                                                              |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                                                 |             |          |                |                         |              |                     |

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                 | Waste Class | Status   | Date of Status | Managed Onsite/ Offsite                                                                                                                                                                                                   | Radio-active | TCEQ Audit Complete |
|----------------------------------|-------------|----------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------|
| ** No Longer Generated Wastes ** |             |          |                |                                                                                                                                                                                                                           |              |                     |
| 0482202H                         | H           | Inactive | 08/13/2025     | On & Off                                                                                                                                                                                                                  | No           | No                  |
| Description from Generator:      |             |          |                | Carbon tetrachloride used as a solvent for nitrogen trichloride in the suctionchiller at the chlorine recovery area.; Due to waste minimization, ingredient changes or process changes this waste is no longer generated. |              |                     |
| Texas Form Code:                 |             |          |                | 202 Halogenated (e.g., chlorinated) solvent                                                                                                                                                                               |              |                     |
| EPA Form Code:                   |             |          |                | W202 Concentrated halogenated (e.g., chlorinated) solvent                                                                                                                                                                 |              |                     |
| Origin Code:                     |             |          |                | 2 Result of spill clean-up, equipment decommissioning or emergency removal                                                                                                                                                |              |                     |
| Source Code:                     |             |          |                | G13 Cleaning out process equipment                                                                                                                                                                                        |              |                     |
| NAICS Code:                      |             |          |                | 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                     |              |                     |
| Company's Internal Code(s):      |             |          |                | CC0482                                                                                                                                                                                                                    |              |                     |
| EPA Hazardous Waste Numbers:     |             |          |                | D002                                                                                                                                                                                                                      | D019         | D034                |
| Current Management Units:        |             |          |                | None                                                                                                                                                                                                                      |              |                     |
| 0483202H                         | H           | Inactive | 08/13/2025     | On & Off                                                                                                                                                                                                                  | No           | No                  |
| Description from Generator:      |             |          |                | carbon tetrachloride for process contaminated with water; Solid waste registration number and facility have temporarily ceased IHW activities.                                                                            |              |                     |
| Texas Form Code:                 |             |          |                | 202 Halogenated (e.g., chlorinated) solvent                                                                                                                                                                               |              |                     |
| EPA Form Code:                   |             |          |                | W202 Concentrated halogenated (e.g., chlorinated) solvent                                                                                                                                                                 |              |                     |
| Origin Code:                     |             |          |                | 1 Generated on-site from a product process or service activity                                                                                                                                                            |              |                     |
| Source Code:                     |             |          |                | G11 Discarding off-specification or out-of-date chemicals or products                                                                                                                                                     |              |                     |
| NAICS Code:                      |             |          |                | 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                     |              |                     |
| Company's Internal Code(s):      |             |          |                | CC0483                                                                                                                                                                                                                    |              |                     |
| EPA Hazardous Waste Numbers:     |             |          |                | D002                                                                                                                                                                                                                      | U211         |                     |
| Current Management Units:        |             |          |                | None                                                                                                                                                                                                                      |              |                     |
| 04854092                         | 2           | Inactive | 08/13/2025     | On & Off                                                                                                                                                                                                                  | No           | No                  |
| Description from Generator:      |             |          |                | Spent absorbent contaminated with small amount of methoxypropylamine ( a constituent of the boiler water chemical opti-meen - 80985 ) . Initial date of generation is September 20, 1995.                                 |              |                     |
| Texas Form Code:                 |             |          |                | 409 Other non-halogenated organic solids                                                                                                                                                                                  |              |                     |
| Origin Code:                     |             |          |                | 2 Result of spill clean-up, equipment decommissioning or emergency removal                                                                                                                                                |              |                     |
| Company's Internal Code(s):      |             |          |                | 04854092                                                                                                                                                                                                                  |              |                     |
| Current Management Units:        |             |          |                | None                                                                                                                                                                                                                      |              |                     |
| 0488206H                         | H           | Inactive | 08/13/2025     | On & Off                                                                                                                                                                                                                  | No           | No                  |
| Description from Generator:      |             |          |                | Refrigeration skid sludge from old DuPont carbon tet. recovery unit                                                                                                                                                       |              |                     |
| Texas Form Code:                 |             |          |                | 206 Waste oil                                                                                                                                                                                                             |              |                     |
| EPA Form Code:                   |             |          |                | W206 Waste oil                                                                                                                                                                                                            |              |                     |
| Origin Code:                     |             |          |                | 1 Generated on-site from a product process or service activity                                                                                                                                                            |              |                     |
| Source Code:                     |             |          |                | G15 Process equipment change-out or discontinuation of equipment use                                                                                                                                                      |              |                     |
| NAICS Code:                      |             |          |                | 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                     |              |                     |
| Company's Internal Code(s):      |             |          |                | CC088                                                                                                                                                                                                                     |              |                     |
| EPA Hazardous Waste Numbers:     |             |          |                | D028                                                                                                                                                                                                                      |              |                     |
| Current Management Units:        |             |          |                | None                                                                                                                                                                                                                      |              |                     |



## OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Waste Class | Status   | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|----------------|-------------------------|--------------|---------------------|
| ** No Longer Generated Wastes **                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |          |                |                         |              |                     |
| 91511141                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> ONE TIME WASTE: Boiler Cleaning Fluid used to clean equipment prior to commissioning. Consider waste inactive as of 08/01/1999. Waste inactivated due to product change.<br><b>Texas Form Code:</b> 114 Other aqueous waste with low dissolved solids<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC0151<br><b>Current Management Units:</b> None                                                                                                                                                                            |             |          |                |                         |              |                     |
| 91522971                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1           | Inactive | 08/13/2025     | Off-site                | No           | No                  |
| <b>Description from Generator:</b> ONE TIME WASTE - PCB-contaminated mineral oil. Waste inactivated due to one-time shipment.<br><b>Texas Form Code:</b> 297 Nonhazardous liquids with >= 50 ppm and < 500 ppm PCBs<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC9152<br><b>Current Management Units:</b> None                                                                                                                                                                                                                                                 |             |          |                |                         |              |                     |
| 9153206H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | H           | Inactive | 08/13/2025     | Off-site                | No           | No                  |
| <b>Description from Generator:</b> ONE TIME WASTE - Mineral Oil contaminated with PCBs and spent solvent. Waste inactivated due to one-time shipment.<br><b>Texas Form Code:</b> 206 Waste oil<br><b>EPA Form Code:</b> W206 Waste oil<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Source Code:</b> G15 Process equipment change-out or discontinuation of equipment use<br><b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing<br><b>Company's Internal Code(s):</b> CC9153<br><b>EPA Hazardous Waste Numbers:</b> D001 D028 D040 F001 F002<br><b>Current Management Units:</b> None |             |          |                |                         |              |                     |
| 9154319H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | H           | Inactive | 08/13/2025     | Off-site                | No           | No                  |
| <b>Description from Generator:</b> ONE TIME WASTE - Solids contaminated with PCB-contaminated mineral oil and spentsolvents.<br><b>Texas Form Code:</b> 319 Other waste inorganic solids<br><b>EPA Form Code:</b> W319 Other inorganic solids<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Source Code:</b> G16 Oil changes and filter or battery replacement<br><b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing<br><b>Company's Internal Code(s):</b> CC9154<br><b>EPA Hazardous Waste Numbers:</b> F001 F002<br><b>Current Management Units:</b> None                            |             |          |                |                         |              |                     |
| 91553971                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1           | Inactive | 08/13/2025     | Off-site                | No           | No                  |
| <b>Description from Generator:</b> ONE TIME WASTE - PCB capacitors; One time shipment.<br><b>Texas Form Code:</b> 397 Nonhazardous electrical equipment/devices with >= 500 ppm PCBs<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC9155<br><b>Current Management Units:</b> None                                                                                                                                                                                                                                                                                |             |          |                |                         |              |                     |

## Date: 08/14/2025

## 38280

| Texas Waste Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Waste Class | Status   | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|----------------|-------------------------|--------------|---------------------|
| ** No Longer Generated Wastes **                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             |          |                |                         |              |                     |
| 91564091                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> ONE TIME WASTE - unused hydroquinone; One time shipment.<br><b>Texas Form Code:</b> 409 Other non-halogenated organic solids<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC9156<br><b>Current Management Units:</b> None                                                                                                                                                                                                                                                                                                                                                                                                                          |             |          |                |                         |              |                     |
| 9157301H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | H           | Inactive | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> ONE TIME WASTE - 130 tanks dike sump cleanup material.<br><b>Texas Form Code:</b> 301 Soil contaminated with organics<br><b>EPA Form Code:</b> W301 Contaminated Soil<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Source Code:</b> G14 Removal of tank sludge, sediments or slag<br><b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing<br><b>Company's Internal Code(s):</b> CC9157<br><b>EPA Hazardous Waste Numbers:</b> U077<br><b>Current Management Units:</b> None                                                                                                                                                                                    |             |          |                |                         |              |                     |
| 9158404H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | H           | Inactive | 08/13/2025     | On-site                 | No           | No                  |
| <b>Description from Generator:</b> Used activated carbon removed from the chlorine recovery process.; Due to waste minimization, ingredient changes or process changes this waste is no longer generated.<br><b>Texas Form Code:</b> 404 Spent carbon<br><b>EPA Form Code:</b> W310 Filters, solid adsorbents, ion exchange resins and spent carbon<br><b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal<br><b>Source Code:</b> G15 Process equipment change-out or discontinuation of equipment use<br><b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing<br><b>Company's Internal Code(s):</b> CC9158<br><b>EPA Hazardous Waste Numbers:</b> D019 U211<br><b>Current Management Units:</b> None |             |          |                |                         |              |                     |
| 91723192                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> ONE-TIME WASTE: Stabilization sand for tank foundation. Tank was demolished.; One time shipment.<br><b>Texas Form Code:</b> 319 Other waste inorganic solids<br><b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal<br><b>Company's Internal Code(s):</b> CC9172<br><b>Current Management Units:</b> None                                                                                                                                                                                                                                                                                                                                                                              |             |          |                |                         |              |                     |
| 91953191                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> ONE-TIME WASTE. Permanite powder was left over from a job at the plant site. This waste code should be inactivated by 06/30/2004.; One time shipment.<br><b>Texas Form Code:</b> 319 Other waste inorganic solids<br><b>Origin Code:</b> 1 Generated on-site from a product process or service activity<br><b>Company's Internal Code(s):</b> CC9195<br><b>Current Management Units:</b> None                                                                                                                                                                                                                                                                                                                                     |             |          |                |                         |              |                     |

## OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                                                 | Waste Class | Status   | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|----------------|-------------------------|--------------|---------------------|
| ** No Longer Generated Wastes **                                                                                                                                                                                                                                 |             |          |                |                         |              |                     |
| 9197319H                                                                                                                                                                                                                                                         | H           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> ONE-TIME WASTE. Sodium Persulfate material was in the plant warehouse withno identified uses. This waste should be inactivated by 06/30/2004.; One time shipment.                                                             |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                                         |             |          |                |                         |              |                     |
| <b>EPA Form Code:</b> W319 Other inorganic solids                                                                                                                                                                                                                |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                               |             |          |                |                         |              |                     |
| <b>Source Code:</b> G11 Discarding off-specification or out-of-date chemicals or products                                                                                                                                                                        |             |          |                |                         |              |                     |
| <b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing                                                                                                                                                                                                    |             |          |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC9197                                                                                                                                                                                                                        |             |          |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D001                                                                                                                                                                                                                         |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                            |             |          |                |                         |              |                     |
| 9296219H                                                                                                                                                                                                                                                         | H           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> ONE-TIME WASTE. Metals spiking solutions from MACT trial burn. This waste codeshould be inactivated by 06/30/2004.; One time Shipment.                                                                                        |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 219 Other organic liquids                                                                                                                                                                                                                |             |          |                |                         |              |                     |
| <b>EPA Form Code:</b> W219 Other organic liquid                                                                                                                                                                                                                  |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                               |             |          |                |                         |              |                     |
| <b>Source Code:</b> G11 Discarding off-specification or out-of-date chemicals or products                                                                                                                                                                        |             |          |                |                         |              |                     |
| <b>NAICS Code:</b> 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                         |             |          |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC9296                                                                                                                                                                                                                        |             |          |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> D007                                                                                                                                                                                                                         |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                            |             |          |                |                         |              |                     |
| 9444202H                                                                                                                                                                                                                                                         | H           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> ONE-TIME WASTE. Freon 113 was used to heat carbon tetrachloride in the chlorine vaporizor. The Freon was removed from the vaporizor. Waste to be considered inactive on 07/31/1999.Waste inactivated due to source reduction. |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 202 Halogenated (e.g., chlorinated) solvent                                                                                                                                                                                              |             |          |                |                         |              |                     |
| <b>EPA Form Code:</b> W202 Concentrated halogenated (e.g., chlorinated) solvent                                                                                                                                                                                  |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 2 Result of spill clean-up, equipment decommissioning or emergency removal                                                                                                                                                                   |             |          |                |                         |              |                     |
| <b>NAICS Code:</b> 325181 Alkalies and Chlorine Manufacturing                                                                                                                                                                                                    |             |          |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC0444                                                                                                                                                                                                                        |             |          |                |                         |              |                     |
| <b>EPA Hazardous Waste Numbers:</b> F002                                                                                                                                                                                                                         |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                            |             |          |                |                         |              |                     |
| 94453192                                                                                                                                                                                                                                                         | 2           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> Ion Exchange Resin for the deionization of water. (ONE-TIME WASTE). To beinactivated as of 12/31/2000. Waste inactivated due to one-time shipment.                                                                            |             |          |                |                         |              |                     |
| <b>Texas Form Code:</b> 319 Other waste inorganic solids                                                                                                                                                                                                         |             |          |                |                         |              |                     |
| <b>Origin Code:</b> 1 Generated on-site from a product process or service activity                                                                                                                                                                               |             |          |                |                         |              |                     |
| <b>Company's Internal Code(s):</b> CC9445                                                                                                                                                                                                                        |             |          |                |                         |              |                     |
| <b>Current Management Units:</b> None                                                                                                                                                                                                                            |             |          |                |                         |              |                     |

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Industrial and Hazardous Waste

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Texas Waste Code                                                                                                                                                                                                                                    | Waste Class | Status   | Date of Status | Managed Onsite/ Offsite | Radio-active | TCEQ Audit Complete |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|----------------|-------------------------|--------------|---------------------|
| *** No Longer Generated Wastes ***                                                                                                                                                                                                                  |             |          |                |                         |              |                     |
| 94462191                                                                                                                                                                                                                                            | 1           | Inactive | 08/13/2025     | On & Off                | No           | No                  |
| <b>Description from Generator:</b> ONE TIME WASTE.. Oil based drilling fluid generated during the drilling offoundation piers at the Cogeneration facility. Consider this waste inactive as of 2/28/01. Waste inactivated due to one-time shipment. |             |          |                |                         |              |                     |
| Texas Form Code: 219 Other organic liquids                                                                                                                                                                                                          |             |          |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                                                                                                                         |             |          |                |                         |              |                     |
| Company's Internal Code(s): 94462191                                                                                                                                                                                                                |             |          |                |                         |              |                     |
| Current Management Units: None                                                                                                                                                                                                                      |             |          |                |                         |              |                     |
| 94473191                                                                                                                                                                                                                                            | 1           | Inactive | 08/13/2025     | No                      | No           | No                  |
| <b>Description from Generator:</b> One-time shipment. Spent sodium bisulfite that has solidified. Waste should be considered inactive on 03/31/2012.; One time shipment.                                                                            |             |          |                |                         |              |                     |
| Texas Form Code: 319 Other waste inorganic solids                                                                                                                                                                                                   |             |          |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                                                                                                                         |             |          |                |                         |              |                     |
| Company's Internal Code(s): 94473191                                                                                                                                                                                                                |             |          |                |                         |              |                     |
| Current Management Units: None                                                                                                                                                                                                                      |             |          |                |                         |              |                     |
| 9448203H                                                                                                                                                                                                                                            | H           | Inactive | 08/13/2025     | No                      | No           | No                  |
| <b>Description from Generator:</b> ONE-TIME WASTE Waste solvent containing naphthalene and 2-methylnaphthalene. Waste should be considered inactive on 12/31/12.; One time shipment.                                                                |             |          |                |                         |              |                     |
| Texas Form Code: 203 Non-halogenated solvent                                                                                                                                                                                                        |             |          |                |                         |              |                     |
| EPA Form Code: W203 Concentrated non-halogenated (e.g., non-chlorinated) solvent                                                                                                                                                                    |             |          |                |                         |              |                     |
| Origin Code: 1 Generated on-site from a product process or service activity                                                                                                                                                                         |             |          |                |                         |              |                     |
| Source Code: G01 Dip, flush or spray rinsing                                                                                                                                                                                                        |             |          |                |                         |              |                     |
| NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                   |             |          |                |                         |              |                     |
| Company's Internal Code(s): CC9448                                                                                                                                                                                                                  |             |          |                |                         |              |                     |
| EPA Hazardous Waste Numbers: D001                                                                                                                                                                                                                   |             |          |                |                         |              |                     |
| Current Management Units: None                                                                                                                                                                                                                      |             |          |                |                         |              |                     |
| 9449319H                                                                                                                                                                                                                                            | H           | Inactive | 08/13/2025     | No                      | No           | No                  |
| <b>Description from Generator:</b> ONE-TIME WASTE. Contaminated Rockbox Residue generated during cleanup of spill of VCM Trench Solids. Waste should be considered inactive on 07/31/13.; One time shipment.                                        |             |          |                |                         |              |                     |
| Texas Form Code: 319 Other waste inorganic solids                                                                                                                                                                                                   |             |          |                |                         |              |                     |
| EPA Form Code: W319 Other inorganic solids                                                                                                                                                                                                          |             |          |                |                         |              |                     |
| Origin Code: 2 Result of spill clean-up, equipment decommissioning or emergency removal                                                                                                                                                             |             |          |                |                         |              |                     |
| Source Code: G32 Cleanup of spill residues                                                                                                                                                                                                          |             |          |                |                         |              |                     |
| NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing                                                                                                                                                                                   |             |          |                |                         |              |                     |
| Company's Internal Code(s): CC9449                                                                                                                                                                                                                  |             |          |                |                         |              |                     |
| EPA Hazardous Waste Numbers: F001                                                                                                                                                                                                                   |             |          |                |                         |              |                     |
| Current Management Units: None                                                                                                                                                                                                                      |             |          |                |                         |              |                     |
| F003 F005 F025 K019 K020                                                                                                                                                                                                                            |             |          |                |                         |              |                     |

As of 08/13/2025, The next unassigned sequence number for WASTES is 9451









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|             |                                             |             |                |                                  |                    |                  |                   |                            |  |  |
|-------------|---------------------------------------------|-------------|----------------|----------------------------------|--------------------|------------------|-------------------|----------------------------|--|--|
| 38280       | OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT |             |                |                                  |                    |                  |                   |                            |  |  |
| Unit Number | Unit Type                                   | Unit Status | Date of Status | Classes of Waste Managed in Unit | Unit Permit Number | Unit # on Permit | Regulatory Status | Deed Recording Needed/Date |  |  |
|             |                                             |             |                | Onsite / Offsite                 |                    |                  |                   |                            |  |  |

\*\*\* TEXAS COMMISSION ON ENVIRONMENTAL QUALITY \*\*\*

Notice of Registration

Industrial and Hazardous Waste

38280

OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Unit Number | Unit Type | Unit Status | Date of Status | Classes of Waste Managed in Unit Onsite / Offsite | Unit Permit Number | Unit # on Permit | Regulatory Status | Deed Recording Needed/Date |
|-------------|-----------|-------------|----------------|---------------------------------------------------|--------------------|------------------|-------------------|----------------------------|
|-------------|-----------|-------------|----------------|---------------------------------------------------|--------------------|------------------|-------------------|----------------------------|

|     |                        |        |            |        |     |    |                        |       |
|-----|------------------------|--------|------------|--------|-----|----|------------------------|-------|
| 022 | Container storage area | ACTIVE | 08/22/1990 | 1 / NA | 005 | NA | 01 RCRA permitted unit | YES / |
|-----|------------------------|--------|------------|--------|-----|----|------------------------|-------|

Description from Company:

VCM CSA / Container Storage Area, 41-ft by 21-ft paved and curbed foundation covered by a roof and surrounded by 4 walls. Waste drum storage area I.

System Types:

Wastes Currently Managed at Unit:

H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.

00162020H Oxy Vinyls La Porte Chlorinated By-product

0106489H Clean up of fuel / lubrication oil spills, leaks, and drips

0108407H Solvent contaminated material generated from maintenance activities.

0117211H Spent paint thinner is generated during plant maintenance activities. Initial generation is estimated in 1988.

0121319H Broken lamps generated during replacement and maintenance of lights.

0133409H Paint-related material generated when paint or paint thinner dries in pails; 1988

0135117H Waste Mercury from clean-up of mercury spills and disposal of mercury-containing equipment.

0136206H Waste oil generated during maintenance of pumps or other oil containing equipment.

0138219H Unused resin material used for fiberglass work.

0139219H Unused sealant/adhesive that was not used during maintenance activities that is no longer needed, or out of spec.

0140209H Unused varnish used as coating on insulation work.

0177205H Fuel oil contaminated water from flushing out process lines orequipment.

0180309H Battery changeout

0190404H spent carbon canisters from aerosol can puncturing devices

0192204H Residue from spray cans that have been punctured.

0196409H WASTE RESIN GENERATED DURING MAINTENANCE ACTIVITIES

0202211H Waste Gasoline

0203211H Spill of curing agent.

0226319H Heavy Ends tank cleaning residue combined with reboiler / exchanger scale.

0229407H Reboiler scale produced when carbon builds up on the walls of the reboiler tubes.

0238319H Ethylene dichloride (EDC) contaminated material generated during production & maintenance operations.

0241301H Solvent contaminated media (typically soil) is generated during spill clean-up and/or general plant cleanup in the EDC/VCM units.

0242303H Incinerator firebox solids from VCM Incinerators F-550 AND F-570.

0243319H Incinerator brick generated when VCM unit incinerators are cleaned out or rebricked.

0244407H VCM Furnace Coke - carbon residue; 12/91

0246393H spent copper chloride catalyst generatedduring periodic reactor clean-outs,plastic, trash, ppe may be included.

0247319H VCM process area contaminated trench material/sludge

0248219H VCM unit heavy ends are generating during the purification of EDC in the process. The waste is typically piped to the hazardous waste feed tanks and then piped to one of the two on-site

0249310H Filters contaminated with vinyl chloride monomer, ethylene dichloride, and heavyand light ends; 12/91

0250404H Spent carbon contaminated with vinyl chloride

0258219H Mother Liquor from direct chlorination reactor in the VCM unit.

0260310H Absorbent material, plastic and personal protective equipment ; 10/93

0261319H Mother Liquor Contaminated Solids. Waste is generated during cleanout of the Mother Liquor (EDC) tank. Waste consists of iron (ferric chloride) contaminated with EDC.

0273319H Spent molecular sieve form OHC dryer generated when it becomes spent and is replaced.

0289303H Scale from incinerator flue gas caustic wash train. Initial date of generation was 9/19/1996.

0295319H Spiking solution contaminated solids.

0298393H Spent Catalytic Oxidizer catalyst generated at the VCM Incinerators F-550 and F-570.

0301301H By-Prod contaminated materials includingdirt, rock, cement and debris

0406609H Chlorinated resin which comes off the walls of the fiberglass piping and vessels in the chlorine drying area.

0471319H Chlorine process piping and solids are generated during maintenance activities when solids and/or piping are removed from the process

0504219H Natural gas used within the Cogen plant has liquids entrained in the gas. Filter/Separators are installed to prevent the liquid from entering the combustion section of the gas turbine.

0601201H Methanol & Water

0603003H Ethylene Lab Pygas

0604388H Glass vials, wipes, and plastic used for sampling py gas and wipe down after testing is complete.

06053041 Ash, Thermal Residue, Coke Fines that was swept or vacuumed from the SCR furnace 4150 when plugged.

0607319H Trash filtered from plant trenches that gets strained before discharging into the contaminated water storage tank.

0609393H The Cornetech catalyst became spent over time as a result of converting the NOx generated in the furnace flue gas into Nitrogen and air over the course of 2 to 3 years.















OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

38280

| Unit Number | Unit Type      | Description from Company:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Unit Status | Date of Status | Classes of Waste Managed in Unit Onsite / Offsite | Unit Permit Number | Unit # on Permit | Regulatory Status                                | Deed Recording Needed/Date |
|-------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------|---------------------------------------------------|--------------------|------------------|--------------------------------------------------|----------------------------|
| 060         | Tank (surface) | D533B EFFLUENT CLARIFIER SCUM TANK<br>Wastes Currently Managed at Unit: 01501021 Wastewater from organic process units and facility stormwater collected in sumpsand/or dikes. The water is steam stripped to recover organics. The tails fromthe steam strippers become                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ACTIVE      | 04/22/1992     | 1 / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| 061         | Tank (surface) | D546 FILTER BACKWASH PUMP TANK<br>Wastes Currently Managed at Unit: 01501021 Wastewater from organic process units and facility stormwater collected in sumpsand/or dikes. The water is steam stripped to recover organics. The tails fromthe steam strippers become                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ACTIVE      | 04/22/1992     | 1 / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| 062         | Sump           | Q541 BIOSLUDGE SUMP<br>Wastes Currently Managed at Unit: 01501021 Wastewater from organic process units and facility stormwater collected in sumpsand/or dikes. The water is steam stripped to recover organics. The tails fromthe steam strippers become                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ACTIVE      | 04/22/1992     | 1 / NA                                            | NA                 | NA               | 10 RCRA Permit exempt - Other                    | YES /                      |
| 063         | Sump           | 6555 INCINERATOR HCL SUMP<br>Wastes Currently Managed at Unit: 0293105H Hazardous wastewater at VCM; low pH water due to HCl in stream from incinerators.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ACTIVE      | 04/22/1992     | H / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| 064         | Sump           | G575 Incinerator HCl Sump<br>Wastes Currently Managed at Unit: 0293105H Hazardous wastewater at VCM; low pH water due to HCl in stream from incinerators.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ACTIVE      | 04/22/1992     | H / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| 065         | Incinerator    | CCIN-1 / Halogen acid furnace, horizontal flow, liquid hazardous waste industrial furnace consisting of a firebox (combustion zone) and waste heat boiler. Maximum capacity for hazardous waste feed 5500 pph.<br>H040 Incineration - thermal destruction other than use as a fuel<br>0016202H Oxy Vinyls La Porte Chlorinated By-product<br>0136206H Waste oil generated during maintenance of pumps or other oil containing equipment.<br>0248219H VCM unit heavy ends are generating during the purification of EDC in the process. The waste is typically piped to the hazardous waste feed tanks and then piped to one of the two on-site<br>0251219H VCM Light Ends are generated at the VCM Unit during the purification process. Estimated initial generation date 4Q91.<br>0293105H Hazardous wastewater at VCM; low pH water due to HCl in stream from incinerators.<br>0339219H EDC unit heavy ends are generated during the final distillation step. Typically, the EDC heavy ends from the EDC unit (T-18432) are provided to another plant as a feed stock and are not | ACTIVE      | 05/28/1993     | H / NA                                            | 001                | NA               | 01 RCRA permitted unit                           | YES /                      |
|             |                | Wastes Previously Managed at Unit: 0117211H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |                |                                                   |                    |                  |                                                  |                            |



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Industrial and Hazardous Waste

OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| 38280 | Unit Number | Unit Type              | Description from Company:<br>System Types:<br>Wastes Currently Managed at Unit:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Unit Status | Date of Status | Classes of Waste Managed in Unit<br>Onsite / Offsite | Unit Permit Number | Unit # on Permit | Regulatory Status                                | Deed Recording Needed/Date |
|-------|-------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------|------------------------------------------------------|--------------------|------------------|--------------------------------------------------|----------------------------|
| 068   |             | Container storage area | Paved container storage area at VCM Heavy Ends Loading/Unloading.<br>H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br>02403191 VCM process area trench material (non-hazardous)<br>0241301H Solvent contaminated media (typically soil) is generated during spill clean-up and/or general plant cleanup in the EDC/VCM units.<br>02453931 Unused and spent copper chloride catalyst is generated during periodic catalystchange-outs. Miscellaneous items (plastic, trash, personal protective equipment) used during catalyst<br>0246393H spent copper chloride catalyst generatedduring periodic reactor clean-outs,plastic, trash, ppe may be included.<br>02523192 Wastewater stripper packing. Packing in wastewater trippers must be periodically replaced. Prior to maintenance activities, column (& packing) is decontaminated by steaming until<br>02543061 Limestone sludge is generated during neutralization of HCl generated during incineration of chlorinated organics. The m<br>0255319H Rockbox residue generated during clean-out and other maintenance activities required at limestone neutralization equipment (rockbox) in VCM unit. 10/93<br>02563191 Rockbox residue generated during lean-out and other maintenance activities required at limestone neutralization equipment<br>0258219H Mother Liquor from direct chlorination reactor in the VCM unit.<br>02593192 Rockbox residue generated during clean out and other maintenance activities required at limestone neutralization equipment.<br>0268409H HE/LE Dike Liner is generated when spent liner is removed/repaired from secondary containment dike of Heavy Ends/Light Ends storage. Waste is listed due to the "mixture" and "derivative"<br>02704042 Spent activated carbon drums generated during maintenance activities. Drums areused as back-up devices in vacuuming activities. Materials vacuumed are steamcleaned before vacuuming<br>0294319H Sandfilter Sand<br>05023102 spent Natural Gas Filters | ACTIVE      | 05/28/1993     | 1 / NA                                               | NA                 | NA               | 13 RCRA Pmt Exempt - Accumulation Time           | YES /                      |
| 069   |             | Sump                   | Hydroblast pad sump/filter located in VCM unit.<br>H120 Combination of chemical, biological, and/or physical treatment<br>0229407H Reboiler scale produced when carbon builds up on the walls of the reboiler tubes.<br>94473191                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ACTIVE      | 05/28/1993     | 1H / NA                                              | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| 070   |             | Container storage area | Northwest section of 130<br>H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br>01884061 RCRA empty containers - drums, totes, etc. from industrial water treatment chemicals and oil.<br>0241301H Solvent contaminated media (typically soil) is generated during spill clean-up and/or general plant cleanup in the EDC/VCM units.<br>02962111 Waste polymer generated from wastewater treatment process.<br>04023062 Brine Sludge is generated when impurities are removed from "solution-mined" brine. Calcium and magnesium impurities are precipitated from the brine by adding sodium carbonate to the<br>0405403H Demister elements were replaced due to pluggage. In the chlorine cooling area there is a wet gas demister which contains (15) elements. These elements remove moisture and other<br>0406609H Chlorinated resin which comes off the walls of the fiberglass piping and vessels in the chlorine drying area.<br>04104092 Clean-out of Brine Ponds to facilitate inspection of pond liner. Solids/dirt sediment removed from bottom of pond.<br>04153191 Alkaline contaminated solids are generated during intermittent maintenance activities (pig-out caustic transfer line, caustic filter replacements) and/or caustic spills. Estimated initial<br>04203191 Acid contaminated solids generated from a maintenance activity and or spill clean up.<br>04903191 Ceramic saddles from the C/A units generated during maintenance activities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ACTIVE      | 05/28/1993     | 1 / NA                                               | NA                 | NA               | 13 RCRA Pmt Exempt - Accumulation Time           | YES /                      |
|       |             |                        | Wastes Previously Managed at Unit:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |                |                                                      |                    |                  |                                                  |                            |
|       |             |                        | 0199404H 0303404H 04083191 9157301H 94473191                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |                |                                                      |                    |                  |                                                  |                            |

## Date: 08/14/2025

OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Unit Number                               | Unit Type                        | Unit Status | Date of Status | Classes of Waste Managed in Unit Onsite / Offsite | Unit Permit Number | Unit # on Permit | Regulatory Status          | Deed Recording Needed/Date |
|-------------------------------------------|----------------------------------|-------------|----------------|---------------------------------------------------|--------------------|------------------|----------------------------|----------------------------|
| 071                                       | Miscellaneous storage containers | ACTIVE      | 05/28/1993     | 2 / NA                                            | NA                 | NA               | 05 Non-Hazardous Regulated | YES /                      |
| <b>Description from Company:</b>          |                                  |             |                |                                                   |                    |                  |                            |                            |
| <b>System Types:</b>                      |                                  |             |                |                                                   |                    |                  |                            |                            |
| <b>Wastes Currently Managed at Unit:</b>  |                                  |             |                |                                                   |                    |                  |                            |                            |
| <b>Wastes Previously Managed at Unit:</b> |                                  |             |                |                                                   |                    |                  |                            |                            |



## Notice of Registration

## Industrial and Hazardous Waste

# OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Unit Number                                                                                                                                                                                                  | Unit Type                        | Unit Status | Date of Status | Classes of Waste Managed in Unit Onsite / Offsite | Unit Permit Number | Unit # on Permit | Regulatory Status                      | Deed Recording Needed/Date |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------|----------------|---------------------------------------------------|--------------------|------------------|----------------------------------------|----------------------------|
| <b>Wastes Currently Managed at Unit:</b>                                                                                                                                                                     |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 04104092 Clean-out of Brine Ponds to facilitate inspection of pond liner. Solids/dirt sediment removed from bottom of pond.                                                                                  |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 04153191 Alkaline contaminated solids are generated during intermittent maintenance activities (pig-out caustic transfer line, caustic filter replacements) and/or caustic spills. Estimated initial         |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 04163192 Class 2 alkaline contaminated solids are generated during intermittent maintenance activities and/or caustic spills.                                                                                |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 04203191 Acid contaminated solids generated from a maintenance activity and or spill clean up.                                                                                                               |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 04774032 Fiberglass reinforced plastic (FRP) cell heads generated from the routine change-out of the cell heads on the chlorine diaphragm cells in the chlorine cell linearea. Initial date of generation on |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 04903191 Ceramic saddles from the C/A units generated during maintenance activities                                                                                                                          |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 04955192 Clean out of solids from C/A process ponds.                                                                                                                                                         |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 04961101 Organic contaminated cell renewal wastewater. Company Waste Description is CC0496.                                                                                                                  |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 05013192 Inlet air housing media from Co-gen unit. Water hardness is deposited on mediawhen water is evaporated.                                                                                             |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 05023102 spent Natural Gas Filters                                                                                                                                                                           |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 05033192 Ion Exchange Resin                                                                                                                                                                                  |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 05053071 Cogen HRSG tube residue                                                                                                                                                                             |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 06001131 Ethylene commissioning cleaning solution.                                                                                                                                                           |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 06023101 V-4240 Spent Filters and Coalescers                                                                                                                                                                 |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 06053041 Ash, Thermal Residue, Coke Fines that was swept or vacuumed from the SCR furnace 4150 when plugged.                                                                                                 |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 06223191 Prior to shutting unit down, caustic tanks are drained and flushed clean with boiler feed water.                                                                                                    |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 07003191 Pipeline Cleaning Debris                                                                                                                                                                            |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 07011011 Pipeline Flush Water                                                                                                                                                                                |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 07023101 Spent Filters from Ethylene Pipeline                                                                                                                                                                |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 07044041 Ethylene Activated Carbon                                                                                                                                                                           |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 08061191 Old unused product in unlabeled drums.                                                                                                                                                              |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 08074062 Cut up decontaminated totes.                                                                                                                                                                        |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 94501992 Brine/ Sodium Nitrite. Waste generated on 9/21/2017.                                                                                                                                                |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 00700011 01113902 0601201H 0603003H 0604388H                                                                                                                                                                 |                                  |             |                |                                                   |                    |                  |                                        |                            |
| <b>Wastes Previously Managed at Unit:</b>                                                                                                                                                                    |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 073                                                                                                                                                                                                          | Container storage area           | ACTIVE      | 10/10/1994     | 1 / NA                                            | NA                 | NA               | 13 RCRA Pmt Exempt - Accumulation Time | YES /                      |
| <b>Description from Company:</b>                                                                                                                                                                             |                                  |             |                |                                                   |                    |                  |                                        |                            |
| <b>System Types:</b>                                                                                                                                                                                         |                                  |             |                |                                                   |                    |                  |                                        |                            |
| <b>Wastes Currently Managed at Unit:</b>                                                                                                                                                                     |                                  |             |                |                                                   |                    |                  |                                        |                            |
| Container storage area located at the Oxyhydrochlorination (OHC) Unit in the VCM Plant.                                                                                                                      |                                  |             |                |                                                   |                    |                  |                                        |                            |
| H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.                                                                                             |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 02043012 Spill materials from release of corrosion inhibitor to ground.                                                                                                                                      |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 02374031 Steam Stripper Packing                                                                                                                                                                              |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 0238319H Ethylene dichloride (EDC) contaminated material generated during production & maintenance operations.                                                                                               |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 02403191 VCM process area trench material (non-hazardous)                                                                                                                                                    |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 02453931 Unused and spent copper chloride catalyst is generated during periodic catalystchange-outs. Miscellaneous items (plastic, trash, personal protective equipment) used during catalyst                |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 0246393H spent copper chloride catalyst generatedduring periodic reactor clean-outs,plastic, trash, ppe may be included.                                                                                     |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 0247319H VCM process area contaminated trench material/sludge                                                                                                                                                |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 0255319H Rockbox residue generated during clean-out and other maintenance activities required at limestone neutralization equipment (rockbox) in VCM unit. 10/93                                             |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 02563191 Rockbox residue generated during lean-out and other maintenance activities required at limestone neutralization equipment                                                                           |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 02593192 Rockbox residue generated during clean out and other maintenance activities required at limestone neutralization equipment.                                                                         |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 0275407H Dewatered sludge generated from the clean-out of the EDC stormwater tank locatedin the VCM plant. The sludge was generated on 09/30/94.                                                             |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 02903902 nonhaz. construction debris includes concrete,rebar,plywood,soil,plasticinsulation(non-asbestos),steel(pipe,etc)                                                                                    |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 0292404H Spent activated carbon used to remove organics from EDC/VCM wastewater.                                                                                                                             |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 0294319H Sandfilter Sand                                                                                                                                                                                     |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 02863902                                                                                                                                                                                                     |                                  |             |                |                                                   |                    |                  |                                        |                            |
| <b>Wastes Previously Managed at Unit:</b>                                                                                                                                                                    |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 074                                                                                                                                                                                                          | Miscellaneous storage containers | ACTIVE      | 12/20/1994     | 2 / NA                                            | NA                 | NA               | 05 Non-Hazardous Regulated             | YES /                      |
| <b>Description from Company:</b>                                                                                                                                                                             |                                  |             |                |                                                   |                    |                  |                                        |                            |
| <b>System Types:</b>                                                                                                                                                                                         |                                  |             |                |                                                   |                    |                  |                                        |                            |
| <b>Wastes Currently Managed at Unit:</b>                                                                                                                                                                     |                                  |             |                |                                                   |                    |                  |                                        |                            |
| Medical Department Building storing Class 2 medical waste.                                                                                                                                                   |                                  |             |                |                                                   |                    |                  |                                        |                            |
| H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.                                                                                             |                                  |             |                |                                                   |                    |                  |                                        |                            |
| 01780092 Medical waste generated by daily activities at the Medical Department. Date ofinitial generation was 12/89.                                                                                         |                                  |             |                |                                                   |                    |                  |                                        |                            |









## 38280

| Unit Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Unit Type                          | Unit Status | Date of Status | Classes of Waste Managed in Unit Onsite / Offsite | Unit Permit Number | Unit # on Permit | Regulatory Status                                | Deed Recording Needed/Date |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-------------|----------------|---------------------------------------------------|--------------------|------------------|--------------------------------------------------|----------------------------|
| 090                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Container storage area             | ACTIVE      | 01/19/2000     | 2 / NA                                            | NA                 | NA               | 05 Non-Hazardous Regulated                       | YES /                      |
| <b>Description from Company:</b> Container storage area for dewatered brine sludge (CCP) trailer.<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Currently Managed at Unit:</b> 04023062 Brine Sludge is generated when impurities are removed from "solution-mined" brine. Calcium and magnesium impurities are precipitated from the brine by adding sodium carbonate to the brine. |                                    |             |                |                                                   |                    |                  |                                                  |                            |
| 091                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Sump                               | ACTIVE      | 03/08/2000     | 1 / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Description from Company:</b> Co-Generation East Oil / Water Separator Sump<br><b>System Types:</b> H039 Other recovery or reclamation for reuse including acid regeneration, organics recovery, etc.<br><b>Wastes Currently Managed at Unit:</b> 01101141 Co-generation wastewater stream                                                                                                                                                                                                |                                    |             |                |                                                   |                    |                  |                                                  |                            |
| 092                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Sump                               | ACTIVE      | 03/08/2000     | 1 / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Description from Company:</b> Co-Generation West Oil / Water Separator Sump<br><b>System Types:</b> H039 Other recovery or reclamation for reuse including acid regeneration, organics recovery, etc.<br><b>Wastes Currently Managed at Unit:</b> 01101141 Co-generation wastewater stream                                                                                                                                                                                                |                                    |             |                |                                                   |                    |                  |                                                  |                            |
| 093                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Tank                               | ACTIVE      | 03/09/2000     | 1 / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Description from Company:</b> 56-D-001A Neutralization Tank at Co-gen<br><b>System Types:</b> H121 Neutralization only<br><b>Wastes Currently Managed at Unit:</b> 01101141 Co-generation wastewater stream                                                                                                                                                                                                                                                                               |                                    |             |                |                                                   |                    |                  |                                                  |                            |
| 094                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Tank                               | ACTIVE      | 03/09/2000     | 1 / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Description from Company:</b> 56-D-001B Neutralization Tank at Co-gen<br><b>System Types:</b> H121 Neutralization only<br><b>Wastes Currently Managed at Unit:</b> 01101141 Co-generation wastewater stream                                                                                                                                                                                                                                                                               |                                    |             |                |                                                   |                    |                  |                                                  |                            |
| 095                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Distillation/Solvent recovery unit | ACTIVE      | 10/30/2000     | H / NA                                            | NA                 | NA               | 10 RCRA Permit exempt - Other                    | YES /                      |
| <b>Description from Company:</b> Solvent still for the recovery of spent solvents<br><b>System Types:</b> H020 Solvents recovery<br><b>Wastes Currently Managed at Unit:</b> 0117211H Spent paint thinner is generated during plant maintenance activities. Initial generation is estimated in 1988.                                                                                                                                                                                         |                                    |             |                |                                                   |                    |                  |                                                  |                            |
| 096                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Container storage area             | INACTIVE    | 07/19/2012     | H / NA                                            | NA                 | NA               | 03 RCRA Permit Exempt<90 Day Storage             | YES /                      |
| <b>Description from Company:</b> Area east of Cl2 Recovery unit<br><b>System Types:</b> H120 Combination of chemical, biological, and/or physical treatment<br><b>Wastes Previously Managed at Unit:</b> 0498119H                                                                                                                                                                                                                                                                            |                                    |             |                |                                                   |                    |                  |                                                  |                            |

## Date: 08/14/2025

38280

| Unit Number                                                                                                                                                                                                                                                                                                                      | Unit Type                        | Unit Status | Date of Status | Classes of Waste Managed in Unit Onsite / Offsite | Unit Permit Number | Unit # on Permit | Regulatory Status                                | Deed Recording Needed/Date |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------|----------------|---------------------------------------------------|--------------------|------------------|--------------------------------------------------|----------------------------|
| 097                                                                                                                                                                                                                                                                                                                              | Miscellaneous storage containers | INACTIVE    | 07/19/2012     | H / NA                                            | NA                 | NA               | 03 RCRA Permit Exempt<90 Day Storage             | YES /                      |
| <b>Description from Company:</b> Concrete pad at chlorine recovery unit<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Previously Managed at Unit:</b> 9158404H                                                           |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| 098                                                                                                                                                                                                                                                                                                                              | Sump                             | ACTIVE      | 07/09/2004     | 1 / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Description from Company:</b> HCl Dock sump<br><b>System Types:</b> H135 Discharge to sewer/POTW or NPDES (with prior storage - with or without treatment)<br><b>Wastes Currently Managed at Unit:</b> 04001131 C/A wastewater from the chlorine-causticprocess areas and stormwater. Estimatedinitial generation 1988.       |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| 099                                                                                                                                                                                                                                                                                                                              | Sump                             | ACTIVE      | 07/09/2004     | 1 / NA                                            | NA                 | NA               | 08 RCRA Permit exempt-waste water treatment unit | YES /                      |
| <b>Description from Company:</b> PCE Dock sump<br><b>System Types:</b> H135 Discharge to sewer/POTW or NPDES (with prior storage - with or without treatment)<br><b>Wastes Currently Managed at Unit:</b> 04001131 C/A wastewater from the chlorine-causticprocess areas and stormwater. Estimatedinitial generation 1988.       |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| 100                                                                                                                                                                                                                                                                                                                              | Container storage area           | ACTIVE      | 06/10/2008     | H / NA                                            | NA                 | NA               | 13 RCRA Pmt Exempt - Accumulation Time           | YES /                      |
| <b>Description from Company:</b> Cell Renewal dip tank liquid waste<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Currently Managed at Unit:</b> 0497105H Spent Cell renewal dip tank solution                           |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| 101                                                                                                                                                                                                                                                                                                                              | Container storage area           | ACTIVE      | 01/05/2009     | 1 / NA                                            | NA                 | NA               | 05 Non-Hazardous Regulated                       | YES /                      |
| <b>Description from Company:</b> Roll-off storage area<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Currently Managed at Unit:</b> 01073101 Clean up of oil and fuel spills. Estimated initial date of generation 1988. |                                  |             |                |                                                   |                    |                  |                                                  |                            |
| 102                                                                                                                                                                                                                                                                                                                              | Container storage area           | ACTIVE      | 10/11/2010     | NA / NA                                           | NA                 | NA               | 05 Non-Hazardous Regulated                       | YES /                      |
| <b>Description from Company:</b> Concrete area south of Plant 1 Cooling Tower.<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.                                                                                                          |                                  |             |                |                                                   |                    |                  |                                                  |                            |











## Industrial and Hazardous Waste

## 38280

| Unit Number | Unit Type                        | Description from Company:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Unit Status | Date of Status | Classes of Waste Managed in Unit Onsite / Offsite | Unit Permit Number | Unit # on Permit | Regulatory Status                    | Deed Recording Needed/Date |
|-------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------|---------------------------------------------------|--------------------|------------------|--------------------------------------|----------------------------|
| 115         | Container storage area           | <p>Concrete area West of C-2210 in VCM Plant 2</p> <p><b>System Types:</b><br/>H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.</p> <p><b>Wastes Currently Managed at Unit:</b><br/>02274912 Dewatered biological treatment sludge ( biomass) is generated from wastewater treatment plants operated at this facility. (a) VCM Unit - initial generation 4091; generation rate is 0228491H Dewatered biological treatment sludge (biomass) is generated from the wastewater treatment plant operated at this facility. The stream is designated hazardous due to the derived from rule 02374031 Steam Stripper Packing<br/>02403191 VCM process area trench material (non-hazardous)<br/>02573062 Limestone sludge is generated during neutralization of Hcl generated during incineration of chlorinated organics<br/>02593192 Rockbox residue generated during clean out and other maintenance activities required at limestone neutralization equipment.<br/>0275407H Dewatered sludge generated from the clean-out of the EDC stormwater tank located in the VCM plant. The sludge was generated on 09/30/94.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ACTIVE      | 06/08/2015     | 1 / NA                                            | NA                 | NA               | 03 RCRA Permit Exempt<90 Day Storage | YES /                      |
| 116         | Container storage area           | <p>Waste Asbestos Container Storage Area North of Cell Renewal</p> <p><b>System Types:</b><br/>H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.</p> <p><b>Wastes Currently Managed at Unit:</b><br/>04033111 Asbestos and asbestos contaminated material</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ACTIVE      | 06/01/2016     | 1 / NA                                            | NA                 | NA               | 05 Non-Hazardous Regulated           | YES /                      |
| 117         | Drip pad                         | <p>Waste Asbestos Containment Pad Near Press</p> <p><b>System Types:</b><br/>H100 Physical treatment only (adsorption/absorption/separation/stripping/dewatering)</p> <p><b>Wastes Currently Managed at Unit:</b><br/>04001131 C/A wastewater from the chlorine-caustic process areas and stormwater. Estimated initial generation 1988.<br/>04033111 Asbestos and asbestos contaminated material</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ACTIVE      | 06/01/2016     | 1 / NA                                            | NA                 | NA               | 05 Non-Hazardous Regulated           | YES /                      |
| 118         | Miscellaneous storage containers | <p>Ethylene Furnace area; North, South, East, and West; concrete pad. This unit is managed as a less than 90 day unit.</p> <p><b>System Types:</b><br/>H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.</p> <p><b>Wastes Currently Managed at Unit:</b><br/>05033192 Ion Exchange Resin<br/>06023101 V-4240 Spent Filters and Coalescers<br/>06053041 Ash, Thermal Residue, Coke Fines that was swept or vacuumed from the SCR furnace 4150 when plugged.<br/>06063041 Waste Generated on November 6, 2018. Coke from inside Ethane Cracking Furnace collected during cleaning.<br/>0609393H The Cormetech catalyst became spent over time as a result of converting the NOx generated in the furnace flue gas into Nitrogen and air over the course of 2 to 3 years.<br/>0613319H Water and contaminants that filtered from the plant rain water trenches, water and oil from the water draw off from the gasoline and oil tanks and process water from the Saturator<br/>06143041 Coke from inside ethane cracking furnace coils that had spalled off and was collected in coke catcher during normal operations, and contains moisture.<br/>06233931 SCR removed from Ethylene and VCM furnaces during maintenance or clean-outs for repairs.<br/>06263192 The packing from C-4210 Ethane Feed Saturator was removed from equipment during maintenance/shutdown work and replaced. Equipment and packing were steamed cleaned prior to opening of<br/>06273192 The packing from C-4320 Deethanizer was removed from equipment during maintenance/shutdown work and replaced. Equipment and packing were steamed cleaned prior to opening of<br/>06383102 Filter socks used to screen process wastewater going into trenches to collect and filter debris and process waste.<br/>06401192 Water was generated during hydro blasting of equipment at the temporary hydro blast pad. The solids were vacuumed out of the sump and trenches around the hydro blast pad.<br/>0641319H PPE that was used to remove coke fines that filtered through G-4210 A/B strainer and were removed to remove pluggage.</p> | ACTIVE      | 12/05/2017     | 1 / NA                                            | NA                 | NA               | 03 RCRA Permit Exempt<90 Day Storage | YES /                      |





## Industrial and Hazardous Waste

38280

| Unit Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Unit Type                        | Unit Status | Date of Status | Classes of Waste Managed in Unit Onsite / Offsite | Unit Permit Number | Unit on Permit | Regulatory Status                    | Deed Recording Needed/Date |
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| 126                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Miscellaneous storage containers | ACTIVE      | 12/05/2017     | 2H / NA                                           | NA                 | NA             | 03 RCRA Permit Exempt<90 Day Storage | YES /                      |
| <b>Description from Company:</b> Ethy E-4360 Propylene Refrigerant Condenser area, east side, concrete pad<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Currently Managed at Unit:</b> 0601201H Methanol & Water<br>0631310H Filter socks used to screen process wastewater into trenches to collect and filter debris and process waste water.<br>06333102 Activated carbon used to screen process wastewater to purify the process wastewater.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                  |             |                |                                                   |                    |                |                                      |                            |
| 127                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Container storage area           | ACTIVE      | 08/02/2018     | 2 / NA                                            | NA                 | NA             | 03 RCRA Permit Exempt<90 Day Storage | YES /                      |
| <b>Description from Company:</b> Spent Abrasive Media: Sandblasting Sand<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Currently Managed at Unit:</b> 01734902 Sandblasting sand used in daily maintenance activities throughout the plant. Initial date of generation was 06/87.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                  |             |                |                                                   |                    |                |                                      |                            |
| 128                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Miscellaneous storage containers | ACTIVE      | 08/30/2018     | 1 / NA                                            | NA                 | NA             | 05 Non-Hazardous Regulated           | YES /                      |
| <b>Description from Company:</b> Used Oil, Used Antifreeze: CA Concrete Pad S. End of old boiler house.<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Currently Managed at Unit:</b> 01073101 Clean up of oil and fuel spills. Estimated initial date of generation 1988.<br>01372962 Waste Antifreeze<br>01764891 Soil generated from the clean-up of a diesel spill from plant machinery. Initial date of generation was 8/94.<br>01792061 Used oil generated from equipment oil change outs.<br>01843101 Used oil filters<br>0136206H 0177205H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                  |             |                |                                                   |                    |                |                                      |                            |
| 129                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Waste pile                       | ACTIVE      | 04/05/2022     | 2 / NA                                            | NA                 | NA             | 05 Non-Hazardous Regulated           | YES /                      |
| <b>Description from Company:</b> Rockbox residue stockpile placed on concrete pad north of VCM 2 furnaces. Generated annually during Rockbox outages.<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Currently Managed at Unit:</b> 02593192 Rockbox residue generated during clean out and other maintenance activities required at limestone neutralization equipment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                  |             |                |                                                   |                    |                |                                      |                            |
| 130                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Miscellaneous storage containers | ACTIVE      | 10/30/2023     | 12 / NA                                           | NA                 | NA             | 03 RCRA Permit Exempt<90 Day Storage | YES /                      |
| <b>Description from Company:</b> Area west of the multi point ground flare and east of 2nd street.<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Currently Managed at Unit:</b> 06023101 V-4240 Spent Filters and Coalescers<br>06243102 MOLSIVE/DENSTONE WAS USED IN C-4281 A&B DRYERS TO REMOVE RESIDUAL MOISTURE FROM ETHYLENE.<br>06253102 The molsive/denstone was used in C-4335 Ethylene Dryer to remove residual moisture from ethylene. Dryers were steamed cleaned prior to opening.<br>06263192 The packing from C-4210 Ethane Feed Saturator was removed from equipment during maintenance/shutdown work and replaced. Equipment and packing were steamed cleaned prior to opening of<br>06273192 The packing from C-4320 Deethanizer was removed from equipment during maintenance/shutdown work and replaced. Equipment and packing were steamed cleaned prior to opening of<br>06293192 The packing from C-4270 Caustic/Water Wash Tower was removed from equipment during maintenance/shutdown work and replaced. Equipment and packing were steamed cleaned prior to opening of<br>06303192 The packing from C-4452 was removed from equipment during maintenance/shutdown work and replaced. Equipment and packing were steamed cleaned prior to opening.<br>06333102 Activated carbon used to screen process wastewater to purify the process wastewater.<br>06343192 The packing from C-4220 Quench Tower was removed from equipment during maintenance/shutdown work and replaced. Equipment and packing were steamed cleaned prior to opening. |                                  |             |                |                                                   |                    |                |                                      |                            |

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

| Unit Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Unit Type                        | Unit Status | Date of Status | Classes of Waste Managed in Unit Onsite / Offsite | Unit Permit Number | Unit # on Permit | Regulatory Status                    | Deed Recording Needed/Date |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------|----------------|---------------------------------------------------|--------------------|------------------|--------------------------------------|----------------------------|
| 131                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Miscellaneous storage containers | ACTIVE      | 10/30/2023     | 2H / NA                                           | NA                 | NA               | 03 RCRA Permit Exempt<90 Day Storage | YES /                      |
| <b>Description from Company:</b> Area east of cold box and west of 3.25 street.<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Currently Managed at Unit:</b> 0601201H Methanol & Water<br>06333102 Activated carbon used to screen process wastewater to purify the process wastewater.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                  |             |                |                                                   |                    |                  |                                      |                            |
| 132                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Miscellaneous storage containers | ACTIVE      | 10/30/2023     | 2 / NA                                            | NA                 | NA               | 03 RCRA Permit Exempt<90 Day Storage | YES /                      |
| <b>Description from Company:</b> Area next to C3/C4 truck loading.<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Currently Managed at Unit:</b> 06283192 Solids that were generated during hydro blasting and clean out of equipment that contained NORM. This includes secondary containment, rust, scale PPE and equipment (piping, nuts, 06333102 Activated carbon used to screen process wastewater to purify the process wastewater.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  |             |                |                                                   |                    |                  |                                      |                            |
| 133                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Miscellaneous storage containers | ACTIVE      | 10/30/2023     | 2 / NA                                            | NA                 | NA               | 03 RCRA Permit Exempt<90 Day Storage | YES /                      |
| <b>Description from Company:</b> Area southwest corner C3/C4 Truck loading.<br><b>System Types:</b> H141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.<br><b>Wastes Currently Managed at Unit:</b> 06283192 Solids that were generated during hydro blasting and clean out of equipment that contained NORM. This includes secondary containment, rust, scale PPE and equipment (piping, nuts, 06323192 Solids were generated during hydro blasting of equipment at the temporary hydro blast pad that contained NORM.The solids were vacuumed out of the sump and trenches around the hydro 06333102 Activated carbon used to screen process wastewater to purify the process wastewater.<br>0635319H Coke fines that filtered through G-4210 A/B strainer and were removed to remove pluggage.The waste generated is NORM positive.<br>06363192 E-4211 saturator circulation heater A & B were removed from service to remove pluggage. The waste generated is NORM positive.<br>06373192 Solids from the E-4321 Deethanizer which was removed from service during maintenance/shutdown work.<br>06383102 Filter socks used to screen process wastewater going into trenches to collect and filter debris and process waste.<br>06401192 Water was generated during hydro blasting of equipment at the temporary hydro blast pad. The solids were vacuumed out of the sump and trenches around the hydro blast pad. |                                  |             |                |                                                   |                    |                  |                                      |                            |

## **Appendix B**

### **January 22, 2003 TCEQ Letter**

Robert J. Huston, *Chairman*  
R. B. "Ralph" Marquez, *Commissioner*  
Kathleen Hartnett White, *Commissioner*  
Margaret Hoffman, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

January 22, 2003

**RECEIVED**  
**JAN 27 2003**

Mr. David Harvey  
Occidental Chemical Corporation  
P.O. Box CC  
Ingleside, TX 78362-0710

Re: Cell Renewal Sump (RFI Unit No. 5) - Approval of No Further Action Request  
Occidental Chemical Corporation (OxyChem) - Ingleside Plant  
TCEQ Solid Waste Registration No. 38280  
TCEQ Hazardous Waste Permit No. HW-50322  
EPA ID No. TXD982286932

Dear Mr. Harvey:

The Texas Commission on Environmental Quality (TCEQ) has reviewed the inspection report for the Cell Renewal Sump, submitted on October 15, 2002. The inspection was proposed as a follow up to various RCRA Facility Investigations (RFIs) at the unit, as discussed in a September 30, 1999 OxyChem submittal and a November 16, 1999 commission response.

Based on our review of information available to date for the Cell Renewal Sump, it appears that there have not been releases from this unit. Therefore, the TCEQ approves the no further action request.

Additionally, based on our file review, OxyChem has completed the RFI requirements for all eighteen (18) units listed in Section IX.A of the hazardous waste permit. To update the status of these units in the permit, OxyChem will need to submit a permit modification application. Also, as a reminder, if OxyChem identifies new solid waste management units or discovers releases of hazardous waste or hazardous constituents, notification and appropriate actions must be taken as required by Permit Section V.I and regulations in effect at the time of discovery.

Please be aware that it is the continuing obligation of OxyChem to ensure that municipal hazardous waste and industrial solid waste are managed in a manner which does not cause the discharge or imminent threat of discharge of waste into or adjacent to waters in the state, a nuisance, or the endangerment of public health and welfare, as required by 30 Texas Administrative Code §335.4. The burden remains upon OxyChem to take any necessary and authorized action to correct such conditions if and when they occur.

If you have any questions concerning this letter, please contact me at (512) 239-2130, or at Mail Code MC-127 at the letterhead address.

Sincerely,

A handwritten signature in blue ink, appearing to read "Lila Beckley".

Lila Beckley, CA Program Manager  
Corrective Action Section  
Remediation Division

cc: Waste Program Manager, TCEQ Region 14 Office, Corpus Christi



## **Appendix C**

### **Preliminary Review Facility Checklist**

**Preliminary Review Facility Checklist**

|              |                                 |           |           |
|--------------|---------------------------------|-----------|-----------|
| Facility:    | Occidental Chemical Corporation | City      | Ingleside |
| ISW Reg. No: | 38280                           | Date      |           |
| Permit No.   | 50322                           | Reviewer: |           |
| EPA ID No.   | TXD 982 286 932                 |           |           |

**A. Waste Management Units:****RCRA Regulated Units:**

| NOR No. | Description                         | Status        |
|---------|-------------------------------------|---------------|
| 006     | Chlor-Alkali Container Storage Area | Closed (2019) |
| 022     | VCM Container Storage Area          | Active        |
| 023     | Tank C-720A                         | Active        |
| 048     | WW Sludge Container Storage Area    | Closed (2016) |
| 065     | Halogen Acid Furnace CCIN-1         | Active        |
| 066     | Halogen Acid Furnace CCIN-2         | Active        |
| 081     | Tank 6D-02                          | Closed (2015) |
| 082     | Tank C-720B                         | Active        |

**Solid Waste Management Units:**

| NOR No. | Description                                           | Status   |
|---------|-------------------------------------------------------|----------|
| 001     | Tank                                                  | Inactive |
| 002     | CSA - Chlorine Compressor Inlet Cooler Pad            | Inactive |
| 003     | Sump - Ship Dock Sump Tank                            | Active   |
| 004     | Waste Pile – South Area Construction Debris Area      | Inactive |
| 005     | Tank – Waste Drum Storage Area                        | Closed   |
| 007     | Surface Impoundment – Chlorine/Alkali Process WW      | Active   |
| 008     | Sump – Cell Renewal Sump                              | Active   |
| 009     | Sump – Brine Purification Blow-Down Sump              | Active   |
| 010     | Sump – Chlorine Drying Area Sump                      | Active   |
| 011     | Sump – Spent Acid Storage Area Sump                   | Active   |
| 012     | Sump – Chlorine/Alkali Process WW pH Adjustment Sumps | Active   |
| 013     | Sump – Oil Separation Sump                            | Active   |
| 014     | Tank – Brine Sludge Filtration Facility               | Inactive |

| NOR No. | Description                                                         | Status            |
|---------|---------------------------------------------------------------------|-------------------|
| 015     | Sump – 104 Tank Farm Sump                                           | Inactive          |
| 016     | Sump – 105 Tank Farm Sump                                           | Inactive          |
| 017     | Tank – EDC Storm Water                                              | Active            |
| 018     | Tank – EDC WW Filter Press Unit                                     | Inactive          |
| 019     | Misc. Storage Containers – EDC WW Unit Sludge Dumpster Storage Area | Inactive          |
| 020     | Tank – EDC Unit Storm Water and Process Water                       | Inactive          |
| 021     | Misc. Storage Containers – Cell Renewal Dumpster Storage Area       | Inactive          |
| 024     | Waste Treatment – Biological Treatment Unit                         | Inactive          |
| 025     | Tank – D501 Stormwater Collection Tank                              | Inactive          |
| 026     | Tank – EDC WW Secondary Clarification Tank                          | Inactive          |
| 027     | Tank – EDC WW Aerobic Digester Tank                                 | Inactive          |
| 028     | Tank – EDC WW Secondary Clarifier Surge Tank                        | Inactive          |
| 029     | Tank – EDC WW Sand Filter                                           | Inactive          |
| 030     | Tank – EDC WW Secondary pH Adjustment Tank                          | Inactive          |
| 031     | Tank – EDC WW Filter Press                                          | Closure Requested |
| 032     | Tank – EDC WW Filter Press Filtrate Tank                            | Active            |
| 033     | Misc. Storage Containers – North of EDC WW Belt Press Building      | Active            |
| 034     | Tank – EDC Stormwater and Process Water Collection                  | Inactive          |
| 035     | Misc. Storage Containers – Cell Renewal Dumpster Storage            | Active            |
| 036     | Tank – D501 Storm Water Collection Tank                             | Active            |
| 037     | Tank – D502 Storm Water Collection Tank                             | Active            |
| 038     | Tank – D502 Storm Water Collection Tank                             | Active            |
| 039     | Tank – D525 Storm Water Storage Tank A                              | Active            |
| 040     | Tank – D525 Storm Water Storage Tank B                              | Active            |
| 041     | Tank – D531 Equalization Tank                                       | Active            |
| 042     | Tank – D532 Biotreater                                              | Active            |
| 043     | Tank – Z531A Effluent Clarifier                                     | Active            |
| 044     | Tank – Z531B Effluent Clarifier                                     | Active            |
| 045     | Tank – 533A Media Filter                                            | Active            |
| 046     | Tank – Z533B Media Filter                                           | Active            |

| NOR No. | Description                                          | Status   |
|---------|------------------------------------------------------|----------|
| 047     | Tank – D535 Aerobic Digester                         | Active   |
| 049     | Tank – D544 Water Outfall Tank                       | Active   |
| 050     | Tank – D591 Limestone Neutralizer                    | Active   |
| 051     | Tank – D590A HCl Storage                             | Inactive |
| 052     | Tank – D590B HCl Storage                             | Inactive |
| 053     | Tank – D596 Limestone Neutralizer Primary pH Tank    | Active   |
| 054     | Tank – D597 Limestone Neutralizer Secondary pH Tank  | Active   |
| 055     | Tank – D598 Neutralizer Pump Tank                    | Active   |
| 056     | Tank – Z590 Limestone Neutralizer Clarifier          | Active   |
| 057     | Tank – D542 Belt Press Tank                          | Active   |
| 058     | Tank – D595 Neutralizer Clarifier Effluent Pump Tank | Active   |
| 059     | Tank – D534 Effluent Clarifier Pump Tank             | Active   |
| 060     | Tank – D533B Effluent Clarifier Scum Tank            | Active   |
| 061     | Tank – D546 Filter Backwash Pump Tank                | Active   |
| 062     | Sump – Q541 Biosludge Sump                           | Active   |
| 063     | Sump – 6555 Incinerator HCl Sump                     | Active   |
| 064     | Sump – G575 Incinerator HCl Sump                     | Active   |
| 067     | CSA – South of Hydroblast Pad in VCM Unit            | Active   |
| 068     | CSA – VCM Heavy Ends Loading/Unloading               | Active   |
| 069     | Sump – Hydroblast Pad Sump/Filter in VCM Unit        | Active   |
| 070     | CSA – Northwest Section of 130                       | Active   |
| 071     | Misc. Storage Containers - Plant Trash               | Active   |
| 072     | Misc. Storage Containers - Non-Hazardous Waste       | Active   |
| 073     | CSA – Oxyhydrochlorination Unit in VCM Plant         | Active   |
| 074     | Misc. Storage Containers – Medical Depart. Bldg.     | Active   |
| 075     | Tank – Tank D-03 for Heavy Ends from EDC Plant       | Closed   |
| 076     | CSA – Caustic Area                                   | Active   |
| 077     | Miscellaneous Storage Containers                     | Inactive |
| 078     | Misc. Storage Containers – East of Chlorine Park     | Active   |
| 079     | Misc. Storage Containers – East of Chlorine Park     | Inactive |
| 080     | Misc. Storage Containers – VCM Construction Site     | Active   |
| 083     | Misc. Storage Containers – Sand Blast Area           | Active   |
| 084     | CSA – North of VCM 2 Furnaces West to OHC 2          | Active   |

| NOR No. | Description                                           | Status   |
|---------|-------------------------------------------------------|----------|
| 085     | CSA – Container Storage Area                          | Active   |
| 086     | CSA – North of EDC WW Area                            | Active   |
| 087     | CSA – West of VCM Storage Spheres                     | Active   |
| 088     | CSA – Co-Gen Facility                                 | Inactive |
| 089     | CSA – Concrete Area Southeast of                      | Active   |
| 090     | CSA – Dewatered Brine Sludge (CCP) Trailer            | Active   |
| 091     | Sump – Co-Generation East Oil/Water Separator Sump    | Active   |
| 092     | Sump – Co-Generation West Oil/Water Separator Sump    | Active   |
| 093     | Tank – 56-D-001A Neutralization Tank at Co-Gen        | Active   |
| 094     | Tank – 56-D-001B Neutralization Tank at Co-Gen        | Active   |
| 095     | Distillation/Solvent Recovery Unit for Spent Solvents | Active   |
| 096     | CSA – East of Cl <sub>2</sub> Recovery Unit           | Inactive |
| 097     | Misc. Storage Containers – Chlorine Recovery Unit     | Inactive |
| 098     | Sump – HCl Dock Sump                                  | Active   |
| 099     | Sump – PCE Dock Sump                                  | Active   |
| 100     | CSA – Cell Renewal Dip Tank Liquid Waste              | Active   |
| 101     | CSA – Roll-Off Storage Area                           | Active   |
| 102     | CSA – South of Plant 1 Cooling Tower                  | Active   |
| 103     | CSA – SW of VCM Drum Storage Building – Unit 022      | Active   |
| 104     | CSA – South of Boiler House                           | Active   |
| 105     | CSA – East of Chlor-Alkali WW Ponds                   | Active   |
| 106     | CSA – South of VCM Storm Water Tanks (D-525A/B)       | Active   |
| 107     | CSA – East of D-531                                   | Active   |
| 108     | CSA – South of CVS                                    | Active   |
| 109     | CSA – Adjacent to 550/570 Incinerators                | Active   |
| 110     | CSA - Adjacent to Cogen CTGs and HRSGs                | Active   |
| 111     | CSA – Adjacent to Cogen Water Treatment Building      | Active   |
| 112     | CSA – Cogen Laydown/Maintenance Yard                  | Active   |
| 113     | CSA – Concrete Hydroblast Pad                         | Active   |
| 114     | CSA – West of EDC Storage Dike                        | Active   |
| 115     | CSA – West of C-2210 in VCM Plant 2                   | Active   |
| 116     | CSA – Waste Asbestos Area North of Cell Renewal       | Active   |
| 117     | Drip Pad – Waste Asbestos Containment Pad Near Press  | Active   |

| NOR No. | Description                                                                                    | Status   |
|---------|------------------------------------------------------------------------------------------------|----------|
| 118     | Misc. Storage Containers – Ethylene Furnace Area                                               | Active   |
| 119     | Misc. Storage Containers – Ethylene D-4642A BFW Area                                           | Active   |
| 120     | Misc. Storage Containers – Ethylene Area Between Furnaces and Thermal Oxidizers                | Active   |
| 121     | Misc. Storage Containers – Ethy V-4570 Thermal Oxidizer Area                                   | Active   |
| 122     | Misc. Storage Containers – Ethy C-4640 Condensate Flash Drum and E-4210 Ethane Feed Pre-Heater | Active   |
| 123     | Misc. Storage Containers – Ethy E-4341A/B Ethylene Fractionator Reboiler                       | Active   |
| 124     | Misc. Storage Containers – Ethy Tent #1 Area                                                   | Inactive |
| 125     | Misc. Storage Containers – Ethylene Tent #2 Area                                               | Active   |
| 126     | Misc. Storage Containers – Ethy E-4360 Propylene Refrigerant Condenser Area                    | Active   |
| 127     | CSA – Spent Abrasive Media Sandblasting Sand                                                   | Active   |
| 128     | Misc. Storage Containers – Used Oil/Used Antifreeze South End of Old Boiler House              | Active   |
| 129     | Waste Pile – Rockbox Residue Stockpile North of VCM 2 Furnaces                                 | Active   |
| 130     | Misc. Storage Containers – West of Multi-Point Ground Flare                                    | Active   |
| 131     | Misc. Storage Containers – East of Cold Box                                                    | Active   |
| 132     | Misc. Storage Containers – C3/C4 Truck Loading                                                 | Active   |
| 133     | Misc. Storage Containers – SW Corner of C3/C4 Truck Loading                                    | Active   |

## B. Reviewed Documents

## RCRA:

Part A ☒Part B ☒Permit ☒

## CERCLA:

Inspection Reports:

Enforcement Actions

|  |
|--|
|  |
|  |

Exposure Information

Other Information:

|  |
|--|
|  |
|  |

C. Summary

All RCRA Facility Investigation obligations have been met pursuant to the January 22, 2003 letter from TCEQ. Therefore, no outstanding units or areas of concern identified.

D. Recommended Action:

No units or areas of concern are recommended for further investigation.

## **Appendix D**

### **Preliminary Review Unit Checklist**



**Preliminary Review Unit Checklist**

|              |                                 |          |           |
|--------------|---------------------------------|----------|-----------|
| Facility:    | Occidental Chemical Corporation | City     | Ingleside |
| ISW Reg. No: | 38280                           | Date     |           |
| Permit No.   | 50322                           | Reviewer |           |
| EPA ID No.   | TXD 982 286 932                 |          |           |

## Waste Management Unit(s):

|                               |                                                    |
|-------------------------------|----------------------------------------------------|
| A. NOR No.:                   | N/A. All RFI obligations met per 1/22/2003 Letter. |
| B. Description:               |                                                    |
| C. Dates of Operation:        |                                                    |
| Wastes Managed:               |                                                    |
| Pollutant Dispersal Pathways: |                                                    |
| Summary:                      |                                                    |
| Recommended Action:           |                                                    |
| A. NOR No.:                   |                                                    |
| B. Description:               |                                                    |
| C. Dates of Operation:        |                                                    |
| Wastes Managed:               |                                                    |
| Pollutant Dispersal Pathways: |                                                    |
| Summary:                      |                                                    |
| Recommended Action:           |                                                    |
| A. NOR No.:                   |                                                    |
| B. Description:               |                                                    |
| C. Dates of Operation:        |                                                    |
| Wastes Managed:               |                                                    |
| Pollutant Dispersal Pathways: |                                                    |
| Summary:                      |                                                    |
| Recommended Action:           |                                                    |
| A. NOR No.:                   |                                                    |
| B. Description:               |                                                    |
| C. Dates of Operation:        |                                                    |
| Wastes Managed:               |                                                    |
| Pollutant Dispersal Pathways: |                                                    |
| Summary:                      |                                                    |
| Recommended Action:           |                                                    |

|                               |  |
|-------------------------------|--|
| A. NOR No.:                   |  |
| B. Description:               |  |
| C. Dates of Operation:        |  |
| Wastes Managed:               |  |
| Pollutant Dispersal Pathways: |  |
| Summary:                      |  |
| Recommended Action:           |  |
| A. NOR No.:                   |  |
| B. Description:               |  |
| C. Dates of Operation:        |  |
| Wastes Managed:               |  |
| Pollutant Dispersal Pathways: |  |
| Summary:                      |  |
| Recommended Action:           |  |
| A. NOR No.:                   |  |
| B. Description:               |  |
| C. Dates of Operation:        |  |
| Wastes Managed:               |  |
| Pollutant Dispersal Pathways: |  |
| Summary:                      |  |
| Recommended Action:           |  |
| A. NOR No.:                   |  |
| B. Description:               |  |
| C. Dates of Operation:        |  |
| Wastes Managed:               |  |
| Pollutant Dispersal Pathways: |  |
| Summary:                      |  |
| Recommended Action:           |  |
| A. NOR No.:                   |  |
| B. Description:               |  |
| C. Dates of Operation:        |  |
| Wastes Managed:               |  |
| Pollutant Dispersal Pathways: |  |
| Summary:                      |  |
| Recommended Action:           |  |

## **Attachment X.**

### **Air Emission Standards**

| Component ID | Component Class | Area Description | Component Type  | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|-----------------|---------|----------------|----------|---------|------------|
| 25675        | CONECT          | 400 NESD         | FLANGE          | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14379        | VALVE           | 200 SESD         | GATE            | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14723        | CONECT          | 200 SWSD         |                 | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 28106        | VALVE           | 500 EAST         |                 | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31580        | CONECT          | 700SOUTH         | FLANGE          | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30199        | VALVE           | 700 SPHR         |                 | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 28020        | CONECT          | 500 EAST         |                 | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51107        | CONECT          | 500 EAST         | PLG             | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32566        | VALVE           | 700SOUTH         |                 | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31163        | VALVE           | 700 SPHR         |                 | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31562        | VALVE           | 700SOUTH         |                 | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31554        | CONECT          | 700SOUTH         | FLANGE          | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15318        | CONECT          | 200 SWSD         |                 | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31317        | CONECT          | 700NORTH         | FLANGE          | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 25685        | CONECT          | 400 NESD         | SCW             | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30046        | CONECT          | 700 SPHR         | FLANGE          | 8.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 30361        | VALVE           | 700 SPHR         |                 | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 14062        | CONECT          | 200 P/R          | SCW             | 1.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 14893        | CONECT          | 200 SWSD         | FLANGE          | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30831        | VALVE           | 700 SPHR         |                 | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 30504        | CONECT          | 700 SPHR         |                 | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 29992        | CONECT          | 700 SPHR         | FLANGE          | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 32013        | CONECT          | 700SOUTH         | SCW             | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14696        | CONECT          | 200 SWSD         |                 | 3.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32147        | CONECT          | 700SOUTH         | TEE             | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30260        | VALVE           | 700 SPHR         |                 | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32075        | CONECT          | 700SOUTH         | SCW             | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12669        | CONECT          | 200 EAST         |                 | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30886        | VALVE           | 700 SPHR         |                 | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30076        | CONECT          | 700SOUTH         |                 | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15280        | VALVE           | 200 SWSD         | BALL            | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30013        | VALVE           | 700SOUTH         |                 | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 27971        | CONECT          | 500 EAST         | FLANGE          | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32008        | VALVE           | 700SOUTH         | BALL            | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12741        | VALVE           | 200 EAST         |                 | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32714        | VALVE           | 700SOUTH         | CHECK           | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28699        | CONECT          | 500 WEST         | FLANGE          | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29721        | CONECT          | 700 SPHR         | FLANGE          | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 15340        | VALVE           | 200 SWSD         |                 | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29686        | CONECT          | 700 SPHR         |                 | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 29363        | CONECT          | 500 EAST         | FLANGE          | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29779        | CONECT          | 700 SPHR         |                 | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30042        | CONECT          | 700 SPHR         | SCW             | 6.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 30239        | CONECT          | 700 SPHR         | FLANGE          | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31950        | CONECT          | 700SOUTH         | PLG             | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30999        | CONECT          | 700 SPHR         |                 | 6.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 114146       | VALVE           | 700 SPHR         | TOR OPERATED VA | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32046        | VALVE           | 700SOUTH         | BALL            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30202        | CONECT          | 700 SPHR         | SCW             | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 32266        | CONECT          | 700SOUTH         | FLANGE          | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31201        | CONECT          | 700NORTH         | SCW             | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14710        | CONECT          | 200 SWSD         |                 | 3.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32007        | CONECT          | 700SOUTH         | SCW             | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30180        | CONECT          | 700 SPHR         | SCW             | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30074        | VALVE           | 700SOUTH         |                 | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |

| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 30248        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 25676        | CONECT          | 400 NESD         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30456        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32020        | CONECT          | 700SOUTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 114474       | CONECT          | 700 SPHR         | ELB            | 1.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30325        | CONECT          | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32022        | CONECT          | 700SOUTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15282        | CONECT          | 200 SWSD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 13537        | VALVE           | 200 SESD         | BALL           | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30166        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30237        | VALVE           | 700 SPHR         |                | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 14695        | VALVE           | 200 SWSD         |                | 3.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 114416       | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31375        | CONECT          | 700NORTH         | SCW            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15347        | CONECT          | 200 SWSD         |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31869        | VALVE           | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29747        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 29728        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 32012        | VALVE           | 700SOUTH         | BALL           | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29414        | VALVE           | 500 EAST         |                | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31620        | VALVE           | 700SOUTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31513        | VALVE           | 700NORTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28595        | CONECT          | 500 EAST         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30164        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 15316        | VALVE           | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30168        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30367        | VALVE           | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 15338        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32134        | CONECT          | 700SOUTH         | PLG            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32170        | CONECT          | 700SOUTH         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30474        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 15293        | CONECT          | 200 SWSD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14900        | CONECT          | 200 SWSD         |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29161        | CONECT          | 700SOUTH         |                | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31579        | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30512        | VALVE           | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 114473       | CONECT          | 700 SPHR         | ELB            | 1.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31481        | CONECT          | 700NORTH         | FLANGE         | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30459        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 51317        | CONECT          | 500 EAST         | FLANGE         | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51118        | CONECT          | 500 EAST         | ELB            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32139        | CONECT          | 700SOUTH         | SCW            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15324        | VALVE           | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31552        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30952        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 29700        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 15777        | CONECT          | 200 SWSD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29979        | CONECT          | 700 SPHR         | SCW            | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30955        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30004        | CONECT          | 700 SPHR         | FLANGE         | 4.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 29770        | VALVE           | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 114415       | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14041        | VALVE           | 200 SESD         | BALL           | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28101        | CONECT          | 500 EAST         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31090        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |

| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 14158        | CONECT          | 200 P/R          | FLANGE         | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32159        | CONECT          | 700SOUTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31371        | CONECT          | 700NORTH         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 101314       | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32027        | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30836        | CONECT          | 700 SPHR         |                | 4.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 13145        | VALVE           | 200 EAST         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 25697        | VALVE           | 400 NESD         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14895        | CONECT          | 200 SWSD         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 114471       | CONECT          | 700 SPHR         | FLANGE         | 1.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30885        | CONECT          | 700NORTH         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30461        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 114147       | CONECT          | 700 SPHR         | FLANGE         | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31567        | VALVE           | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30954        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 32124        | CONECT          | 700SOUTH         | GAUGE          | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30315        | CONECT          | 700 SPHR         |                | 1.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 30838        | VALVE           | 700 SPHR         |                | 2.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 51121        | CONECT          | 500 EAST         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12739        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 14526        | CONECT          | 200 SESD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31149        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 51108        | CONECT          | 500 EAST         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28030        | CONECT          | 500 EAST         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 24850        | VALVE           | 400 NESD         | CONT           | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30014        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 31172        | VALVE           | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31002        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30910        | CONECT          | 700 SPHR         | R-DISC         | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 12727        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31196        | CONECT          | 700NORTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30029        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 13056        | CONECT          | 200 EAST         | GAUGE          | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29996        | CONECT          | 700 SPHR         | FLANGE         | 6.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 31147        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30487        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30884        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30234        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 29691        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30907        | VALVE           | 700 SPHR         | R-DISC         | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 30492        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31363        | VALVE           | 700NORTH         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29180        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12767        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30254        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 12744        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31873        | CONECT          | 700SOUTH         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30031        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 14721        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31879        | CONECT          | 700SOUTH         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32039        | VALVE           | 700SOUTH         | BALL           | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31572        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30204        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 13058        | VALVE           | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 28698        | CONECT          | 500 WEST         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |

| Component ID | Component Class | Area Description | Component Type  | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|-----------------|---------|----------------|----------|---------|------------|
| 32093        | CONECT          | 700SOUTH         | SCW             | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12667        | VALVE           | 200 EAST         |                 | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30902        | VALVE           | 700 SPHR         |                 | 6.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 29788        | VALVE           | 700 SPHR         |                 | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30319        | CONECT          | 700 SPHR         |                 | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32157        | CONECT          | 700SOUTH         | SCW             | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29783        | CONECT          | 700 SPHR         |                 | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31711        | CONECT          | 700SOUTH         | FLANGE          | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30251        | CONECT          | 700 SPHR         |                 | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 32122        | CONECT          | 700SOUTH         |                 | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29167        | CONECT          | 700SOUTH         | FLANGE          | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30490        | VALVE           | 700 SPHR         |                 | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 32126        | VALVE           | 700SOUTH         | BALL            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 114143       | VALVE           | 700 SPHR         | TOR OPERATED VA | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31176        | CONECT          | 700 SPHR         |                 | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32017        | CONECT          | 700SOUTH         |                 | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32713        | CONECT          | 700SOUTH         | SCW             | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 50681        | CONECT          | 200 EAST         | FLANGE          | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30758        | VALVE           | 700 SPHR         | R-DISC          | 6.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 14871        | VALVE           | 200 SWSD         |                 | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30178        | CONECT          | 700 SPHR         | FLANGE          | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 30233        | CONECT          | 700 SPHR         | FLANGE          | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 114477       | CONECT          | 700 SPHR         | FLANGE          | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 114414       | VALVE           | 700SOUTH         | BALL            | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29998        | CONECT          | 700 SPHR         | FLANGE          | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 30209        | VALVE           | 700 SPHR         |                 | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 30197        | VALVE           | 700 SPHR         |                 | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30023        | CONECT          | 700 SPHR         | FLANGE          | 2.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 31092        | CONECT          | 700 SPHR         | FLANGE          | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31209        | CONECT          | 700NORTH         | SCW             | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12572        | VALVE           | 200 EAST         |                 | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 114475       | VALVE           | 700 SPHR         | BALL            | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32174        | CONECT          | 700SOUTH         | ELB             | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31005        | CONECT          | 700 SPHR         |                 | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 28002        | CONECT          | 500 EAST         | FLANGE          | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28001        | CONECT          | 500 EAST         | FLANGE          | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31563        | VALVE           | 700SOUTH         |                 | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29178        | VALVE           | 700SOUTH         | VALVE           | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32137        | CONECT          | 700SOUTH         | SCW             | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29142        | CONECT          | 700SOUTH         | FLANGE          | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15332        | CONECT          | 200 SWSD         |                 | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 51111        | CONECT          | 500 EAST         | ELB             | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32099        | CONECT          | 700SOUTH         | FLANGE          | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29685        | CONECT          | 700 SPHR         |                 | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 32716        | CONECT          | 700SOUTH         | FLANGE          | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29140        | CONECT          | 700SOUTH         | FLANGE          | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29116        | CONECT          | 700SOUTH         | FLANGE          | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 11643        | CONECT          | 200 EAST         |                 | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 12729        | CONECT          | 200 EAST         |                 | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 11733        | CONECT          | 200 EAST         | GAUGE           | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31870        | CONECT          | 700SOUTH         |                 | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32014        | CONECT          | 700SOUTH         | PLG             | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31086        | CONECT          | 700 SPHR         | FLANGE          | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 15646        | VALVE           | 200 SWSD         |                 | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12740        | CONECT          | 200 EAST         |                 | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |

| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 32048        | CONECT          | 700SOUTH         | PLG            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29690        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 114144       | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31248        | VALVE           | 700NORTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29784        | VALVE           | 700 SPHR         |                | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31185        | CONECT          | 700NORTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30201        | VALVE           | 700 SPHR         | BLOCK VALVE    | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29693        | VALVE           | 700 SPHR         |                | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 29767        | VALVE           | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 28566        | CONECT          | 500 EAST         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30914        | CONECT          | 700 SPHR         |                | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 29696        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30227        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32029        | CONECT          | 700SOUTH         | SCW            | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30015        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 29697        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 31573        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14725        | CONECT          | 200 SWSD         | GAUGE          | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31400        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 51110        | CONECT          | 500 EAST         | ELB            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32030        | CONECT          | 700SOUTH         |                | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31709        | VALVE           | 700SOUTH         | VALVE          | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30189        | CONECT          | 700 SPHR         | SCW            | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 32026        | PUMP            | 700SOUTH         |                | 0.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30935        | CONECT          | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30876        | VALVE           | 700 SPHR         |                | 2.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 30019        | CONECT          | 700 SPHR         | FLANGE         | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30176        | CONECT          | 700 SPHR         | SCW            | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30075        | CONECT          | 700SOUTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14740        | VALVE           | 200 SWSD         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30186        | CONECT          | 700 SPHR         | SCW            | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 31381        | CONECT          | 700NORTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30044        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 30365        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30478        | CONECT          | 700 SPHR         |                | 0.13    | LL             | C-720A/B | 023/082 | > 10%      |
| 30892        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 31880        | CONECT          | 700SOUTH         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12721        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 114419       | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28022        | VALVE           | 500 EAST         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30295        | CONECT          | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 114479       | CONECT          | 700 SPHR         | PLG            | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30904        | VALVE           | 700 SPHR         |                | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 25581        | CONECT          | 400 NESD         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30829        | CONECT          | 700 SPHR         |                | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 32011        | CONECT          | 700SOUTH         | TEE            | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31570        | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29786        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30028        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 29759        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30314        | VALVE           | 700 SPHR         |                | 1.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 30253        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 14084        | VALVE           | 200 P/R          |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32006        | VALVE           | 700SOUTH         | BALL           | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29148        | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |



| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 30932        | VALVE           | 700 SPHR         |                | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30882        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30827        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30241        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 29778        | VALVE           | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30021        | CONECT          | 700 SPHR         | FLANGE         | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 31224        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31712        | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29187        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 11641        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29132        | CONECT          | 700SOUTH         |                | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31553        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28563        | CONECT          | 500 EAST         | SCW            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32023        | CONECT          | 700SOUTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31207        | CONECT          | 700NORTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29718        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30261        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30039        | CONECT          | 700 SPHR         | FLANGE         | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 51114        | CONECT          | 500 EAST         | GAUGE          | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29768        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 28458        | VALVE           | 500 EAST         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30165        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30475        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30232        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30316        | CONECT          | 700 SPHR         |                | 1.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 32021        | VALVE           | 700SOUTH         | BALL           | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 114145       | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30244        | CONECT          | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 30956        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 32004        | CONECT          | 700SOUTH         | FLANGE         | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29744        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 32596        | VALVE           | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30027        | VALVE           | 700 SPHR         | CONT           | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 50679        | CONECT          | 200 EAST         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51316        | PUMP            | 500 EAST         |                | 0.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 13862        | VALVE           | 200 P/R          |                | 1.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32127        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30077        | CONECT          | 700SOUTH         |                | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32267        | CONECT          | 700SOUTH         | FLANGE         | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31151        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 31488        | CONECT          | 700NORTH         | FLANGE         | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30468        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 29790        | VALVE           | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 32009        | CONECT          | 700SOUTH         | SCW            | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51116        | CONECT          | 500 EAST         | REDUCER        | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29785        | VALVE           | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32715        | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31161        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 31174        | CONECT          | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 51318        | CONECT          | 500 EAST         | FLANGE         | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32130        | VALVE           | 700SOUTH         | BALL           | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30828        | VALVE           | 700 SPHR         |                | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 32025        | CONECT          | 700SOUTH         | SCW            | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30471        | VALVE           | 700 SPHR         |                | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29699        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |

| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 29745        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30250        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30472        | CONECT          | 700 SPHR         |                | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30246        | CONECT          | 700 SPHR         | SCW            | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 28016        | VALVE           | 500 EAST         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51125        | CONECT          | 500 EAST         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29361        | CONECT          | 500 EAST         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30503        | CONECT          | 700 SPHR         | SCW            | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 30240        | VALVE           | 700 SPHR         |                | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31143        | CONECT          | 700 SPHR         |                | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30479        | CONECT          | 700 SPHR         |                | 0.13    | LL             | C-720A/B | 023/082 | > 10%      |
| 30463        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 29981        | CONECT          | 700 SPHR         | SCW            | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30433        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30874        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30911        | VALVE           | 700 SPHR         |                | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 51117        | CONECT          | 500 EAST         | REDUCER        | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15283        | VALVE           | 200 SWSD         | BALL           | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31568        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30008        | CONECT          | 700 SPHR         | FLANGE         | 4.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 29698        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 114472       | CONECT          | 700 SPHR         | FLANGE         | 1.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31571        | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28588        | CONECT          | 500 EAST         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51109        | CONECT          | 500 EAST         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31593        | VALVE           | 700SOUTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29720        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 50680        | CONECT          | 200 EAST         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31565        | VALVE           | 700SOUTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51120        | CONECT          | 500 EAST         | ELB            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51119        | CONECT          | 500 EAST         | ELB            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29782        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31236        | VALVE           | 700NORTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31622        | CONECT          | 700SOUTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31871        | CONECT          | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32131        | CONECT          | 700SOUTH         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29174        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30486        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31883        | CONECT          | 700SOUTH         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29781        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30488        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31178        | CONECT          | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29792        | CONECT          | 700 SPHR         |                | 1.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32135        | VALVE           | 700SOUTH         | BALL           | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12754        | CONECT          | 200 EAST         | SCW            | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30862        | CONECT          | 700NORTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29417        | CONECT          | 500 EAST         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 27995        | CONECT          | 500 EAST         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14036        | VALVE           | 200 SESD         | CONT           | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29746        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 15334        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30913        | CONECT          | 700 SPHR         | R-DISC         | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 30369        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29138        | VALVE           | 700SOUTH         | BALL           | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14712        | CONECT          | 200 SWSD         |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |

| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 29689        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30496        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 15336        | CONECT          | 200 SWSD         | GAUGE          | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29773        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30499        | CONECT          | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 14889        | CONECT          | 200 SWSD         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30047        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32037        | CONECT          | 700SOUTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32125        | CONECT          | 700SOUTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30700        | CONECT          | 700 SPHR         |                | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 15346        | CONECT          | 200 SWSD         |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 14126        | CONECT          | 200 SESD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29580        | CONECT          | 700 SPHR         |                | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 20093        | CONECT          | 200 SWSD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31000        | CONECT          | 700 SPHR         |                | 6.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 32033        | CONECT          | 700SOUTH         |                | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31383        | CONECT          | 700NORTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31142        | CONECT          | 700 SPHR         |                | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30177        | VALVE           | 700 SPHR         | CONT           | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 14167        | CONECT          | 200 SESD         |                | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29166        | CONECT          | 700SOUTH         | FLANGE         | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14300        | CONECT          | 200 SESD         | FLANGE         | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29722        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31397        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31494        | CONECT          | 700NORTH         | FLANGE         | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31006        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 32143        | CONECT          | 700SOUTH         | SCW            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29732        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 51115        | CONECT          | 500 EAST         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31878        | VALVE           | 700SOUTH         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32047        | CONECT          | 700SOUTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29114        | VALVE           | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29793        | CONECT          | 700 SPHR         |                | 1.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 12758        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 14719        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32005        | CONECT          | 700SOUTH         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28084        | CONECT          | 500 EAST         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 50684        | CONECT          | 200 EAST         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30207        | VALVE           | 700 SPHR         |                | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 31461        | VALVE           | 700NORTH         |                | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14898        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 15322        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30318        | CONECT          | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32167        | VALVE           | 700SOUTH         | BALL           | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32015        | VALVE           | 700SOUTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29360        | CONECT          | 500 EAST         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31630        | CONECT          | 700SOUTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30020        | CONECT          | 700 SPHR         | FLANGE         | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 51123        | CONECT          | 500 EAST         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30760        | VALVE           | 700 SPHR         | R-DISC         | 6.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 32181        | VALVE           | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31419        | VALVE           | 700NORTH         |                | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15320        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30880        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 32711        | CONECT          | 700SOUTH         | FLANGE         | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |

| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 32095        | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 25686        | CONECT          | 400 NESD         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29730        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30863        | CONECT          | 700NORTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15291        | CONECT          | 200 SWSD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29364        | CONECT          | 500 EAST         | FLANGE         | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30905        | CONECT          | 700 SPHR         |                | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 14887        | CONECT          | 200 SWSD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32003        | PUMP            | 700SOUTH         |                | 0.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31566        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28018        | CONECT          | 500 EAST         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29725        | CONECT          | 700 SPHR         | FLANGE         | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 30026        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 15295        | VALVE           | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 14293        | CONECT          | 200 SESD         | FLANGE         | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30894        | VALVE           | 700 SPHR         |                | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 31159        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 14694        | CONECT          | 200 SWSD         |                | 3.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31373        | CONECT          | 700NORTH         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14891        | CONECT          | 200 SWSD         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30502        | CONECT          | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 31556        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32163        | CONECT          | 700SOUTH         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28071        | CONECT          | 500 EAST         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31167        | CONECT          | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32034        | CONECT          | 700SOUTH         | TEE            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31868        | CONECT          | 700SOUTH         | FLANGE         | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 13060        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31874        | CONECT          | 700SOUTH         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30933        | VALVE           | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30258        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 29681        | VALVE           | 700 SPHR         |                | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 29695        | CONECT          | 700 SPHR         |                | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 14061        | CONECT          | 200 P/R          | SCW            | 1.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 28104        | VALVE           | 500 EAST         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30893        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 31187        | CONECT          | 700NORTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30230        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31379        | CONECT          | 700NORTH         | SCW            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29579        | CONECT          | 700 SPHR         |                | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 30030        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 30484        | CONECT          | 700 SPHR         |                | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 12752        | CONECT          | 200 EAST         | GAUGE          | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30259        | CONECT          | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 15315        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30917        | CONECT          | 700 SPHR         |                | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 32712        | CONECT          | 700SOUTH         | GAUGE          | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32031        | VALVE           | 700SOUTH         | BALL           | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29413        | VALVE           | 500 EAST         |                | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12725        | VALVE           | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32032        | CONECT          | 700SOUTH         |                | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30179        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 30470        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30263        | VALVE           | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29694        | CONECT          | 700 SPHR         |                | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |

| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 28103        | CONECT          | 500 EAST         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29684        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 12695        | VALVE           | 200 EAST         | VALVE          | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32036        | VALVE           | 700SOUTH         | BALL           | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31361        | VALVE           | 700NORTH         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32149        | VALVE           | 700SOUTH         | BALL           | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28107        | CONECT          | 500 EAST         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30900        | CONECT          | 700 SPHR         |                | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 28697        | CONECT          | 500 WEST         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12756        | VALVE           | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30501        | CONECT          | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 29723        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30476        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31169        | VALVE           | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 24852        | CONECT          | 400 NESD         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30485        | CONECT          | 700 SPHR         |                | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 28080        | CONECT          | 500 EAST         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30245        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 14528        | CONECT          | 200 SESD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14711        | VALVE           | 200 SWSD         |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 14732        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 12697        | CONECT          | 200 EAST         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30834        | VALVE           | 700 SPHR         |                | 4.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 29776        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30252        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29682        | CONECT          | 700 SPHR         |                | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 31088        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31189        | CONECT          | 700NORTH         | SCW            | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32172        | CONECT          | 700SOUTH         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51105        | VALVE           | 500 EAST         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30480        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 25703        | VALVE           | 400 NESD         | BLOCK VALVE    | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15281        | CONECT          | 200 SWSD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32165        | CONECT          | 700SOUTH         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12671        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31004        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 32175        | CONECT          | 700SOUTH         | SCW            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 27961        | VALVE           | 500 EAST         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29741        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30017        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 29734        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30462        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30163        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 13057        | CONECT          | 200 EAST         | SCW            | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 14524        | CONECT          | 200 SESD         | FLANGE         | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12574        | VALVE           | 200 EAST         |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 28024        | VALVE           | 500 EAST         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29165        | VALVE           | 700SOUTH         | VALVE          | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 11731        | VALVE           | 200 EAST         |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 14713        | CONECT          | 200 SWSD         |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30040        | CONECT          | 700 SPHR         | FLANGE         | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 30321        | VALVE           | 700 SPHR         |                | 0.25    | LL             | C-720A/B | 023/082 | > 10%      |
| 14730        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32132        | CONECT          | 700SOUTH         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32597        | CONECT          | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |

| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 114470       | VALVE           | 700 SPHR         | BALL           | 1.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32100        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29688        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 12731        | VALVE           | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32051        | CONECT          | 700SOUTH         |                | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29176        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31509        | VALVE           | 700NORTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15297        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29170        | VALVE           | 700SOUTH         | VALVE          | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31171        | VALVE           | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29107        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 27998        | CONECT          | 500 EAST         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32098        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15345        | CONECT          | 200 SWSD         |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32040        | CONECT          | 700SOUTH         | PLG            | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30242        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31330        | VALVE           | 700NORTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51124        | CONECT          | 500 EAST         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32567        | CONECT          | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31872        | VALVE           | 700SOUTH         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14753        | VALVE           | 200 SWSD         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30481        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31078        | CONECT          | 700 SPHR         | SCW            | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 29702        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30872        | VALVE           | 700 SPHR         |                | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30048        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30243        | CONECT          | 700 SPHR         | SCW            | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30022        | CONECT          | 700 SPHR         | FLANGE         | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 29172        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30231        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 14690        | VALVE           | 200 SWSD         |                | 3.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31569        | VALVE           | 700SOUTH         |                | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30495        | CONECT          | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 29757        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 32155        | VALVE           | 700SOUTH         | BALL           | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30327        | CONECT          | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 32598        | CONECT          | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31377        | CONECT          | 700NORTH         | SCW            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12765        | VALVE           | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30006        | CONECT          | 700 SPHR         | FLANGE         | 4.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 29743        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 51106        | CONECT          | 500 EAST         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32564        | PUMP            | 700SOUTH         |                | 0.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12746        | VALVE           | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29365        | CONECT          | 500 EAST         | FLANGE         | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32045        | CONECT          | 700SOUTH         | FLANGE         | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14877        | CONECT          | 200 SWSD         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31575        | CONECT          | 700SOUTH         | FLANGE         | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28565        | VALVE           | 500 EAST         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29995        | CONECT          | 700 SPHR         | FLANGE         | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 29777        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30483        | VALVE           | 700 SPHR         |                | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30024        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 28105        | CONECT          | 500 EAST         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31881        | VALVE           | 700SOUTH         |                | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |

| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 29146        | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51113        | CONECT          | 500 EAST         | ELB            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29370        | CONECT          | 500 EAST         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30363        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31876        | CONECT          | 700SOUTH         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28598        | CONECT          | 500 EAST         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28568        | CONECT          | 500 EAST         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15284        | CONECT          | 200 SWSD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30489        | CONECT          | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 30482        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30169        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 114148       | CONECT          | 700 SPHR         | FLANGE         | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 14728        | VALVE           | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29983        | CONECT          | 700 SPHR         | FLANGE         | 6.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 32569        | CONECT          | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30247        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 12760        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29128        | CONECT          | 700SOUTH         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12742        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30867        | CONECT          | 700NORTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30497        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30249        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31165        | CONECT          | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30434        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 14875        | CONECT          | 200 SWSD         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30317        | VALVE           | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31145        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30182        | CONECT          | 700 SPHR         | SCW            | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 15778        | CONECT          | 200 SWSD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31007        | CONECT          | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 31001        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30477        | VALVE           | 700 SPHR         |                | 0.13    | LL             | C-720A/B | 023/082 | > 10%      |
| 12673        | CONECT          | 200 EAST         | GAUGE          | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30460        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 32041        | VALVE           | 700SOUTH         | BALL           | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29362        | CONECT          | 500 EAST         | FLANGE         | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31710        | CONECT          | 700SOUTH         | FLANGE         | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28026        | CONECT          | 500 EAST         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32043        | VALVE           | 700SOUTH         | BALL           | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29109        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29717        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31153        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30500        | VALVE           | 700 SPHR         |                | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 29724        | CONECT          | 700 SPHR         | FLANGE         | 0.50    | LL             | C-720A/B | 023/082 | > 10%      |
| 32049        | CONECT          | 700SOUTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29687        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30041        | CONECT          | 700 SPHR         | SCW            | 6.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 32028        | CONECT          | 700SOUTH         | FLANGE         | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30193        | CONECT          | 700 SPHR         | SCW            | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 30235        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30203        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 12748        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30025        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 30010        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 31077        | CONECT          | 700 SPHR         | SCW            | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |

| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 11639        | VALVE           | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30018        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 30200        | CONECT          | 700 SPHR         | SCW            | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 32153        | CONECT          | 700SOUTH         | FLANGE         | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14885        | CONECT          | 200 SWSD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14896        | VALVE           | 200 SWSD         |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29112        | CONECT          | 700SOUTH         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15319        | VALVE           | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 30491        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 114478       | VALVE           | 700 SPHR         | GATE           | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30198        | VALVE           | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32096        | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30498        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 15326        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31867        | CONECT          | 700SOUTH         | FLANGE         | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30184        | CONECT          | 700 SPHR         | SCW            | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 27996        | VALVE           | 500 EAST         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30043        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 31866        | VALVE           | 700SOUTH         | BALL           | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29780        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32024        | CONECT          | 700SOUTH         | TEE            | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32182        | CONECT          | 700SOUTH         | GAUGE          | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 13144        | VALVE           | 200 EAST         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 50683        | CONECT          | 200 EAST         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32129        | CONECT          | 700SOUTH         | PLG            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30205        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30871        | VALVE           | 700 SPHR         |                | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 32151        | CONECT          | 700SOUTH         | FLANGE         | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28592        | CONECT          | 500 EAST         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31119        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 30016        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 27958        | CONECT          | 500 EAST         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31157        | VALVE           | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 15344        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 19978        | VALVE           | 200 SWSD         | BALL           | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30953        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30878        | VALVE           | 700 SPHR         | BLOCK VALVE    | 1.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 15342        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29749        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 32052        | CONECT          | 700SOUTH         |                | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31175        | CONECT          | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31155        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 11735        | CONECT          | 200 EAST         | SCW            | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29369        | CONECT          | 500 EAST         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31576        | CONECT          | 700SOUTH         | FLANGE         | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31249        | VALVE           | 700NORTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14378        | VALVE           | 200 SESD         | BALL           | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15330        | VALVE           | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 14879        | CONECT          | 200 SWSD         | PLG            | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 114418       | CONECT          | 700SOUTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 114476       | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 28028        | CONECT          | 500 EAST         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29755        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31877        | CONECT          | 700SOUTH         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31884        | CONECT          | 700SOUTH         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |



| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 30226        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29994        | CONECT          | 700 SPHR         | FLANGE         | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 14522        | CONECT          | 200 SESD         | FLANGE         | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15317        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 12719        | CONECT          | 200 EAST         | SCW            | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29412        | CONECT          | 500 EAST         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29168        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29683        | CONECT          | 700 SPHR         |                | 1.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 31882        | VALVE           | 700SOUTH         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32097        | VALVE           | 700SOUTH         | VALVE          | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32094        | CONECT          | 700SOUTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30167        | CONECT          | 700 SPHR         | FLANGE         | 1.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29791        | VALVE           | 700 SPHR         |                | 1.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30162        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 51112        | CONECT          | 500 EAST         | ELB            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29789        | VALVE           | 700 SPHR         |                | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32183        | CONECT          | 700SOUTH         | SCW            | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30323        | CONECT          | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 30934        | CONECT          | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29719        | CONECT          | 700 SPHR         | FLANGE         | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29692        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 30466        | VALVE           | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 31080        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 28532        | VALVE           | 500 WEST         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29581        | CONECT          | 700 SPHR         |                | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 29771        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31564        | VALVE           | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30957        | CONECT          | 700 SPHR         |                | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 32568        | CONECT          | 700SOUTH         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29118        | CONECT          | 700SOUTH         | FLANGE         | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30371        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 14171        | CONECT          | 200 SESD         |                | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30000        | CONECT          | 700 SPHR         | FLANGE         | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 25580        | CONECT          | 400 NESD         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30473        | CONECT          | 700 SPHR         |                | 3.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 31316        | CONECT          | 700NORTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29787        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 29775        | VALVE           | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 12720        | VALVE           | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 28083        | CONECT          | 500 EAST         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 51102        | CONECT          | 500 EAST         | GAUGE          | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28581        | CONECT          | 500 EAST         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14873        | VALVE           | 200 SWSD         | BALL           | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32141        | VALVE           | 700SOUTH         | BALL           | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31121        | CONECT          | 700 SPHR         | FLANGE         | 0.75    | LL             | C-720A/B | 023/082 | > 10%      |
| 32016        | CONECT          | 700SOUTH         |                | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30887        | CONECT          | 700NORTH         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14157        | CONECT          | 200 P/R          | FLANGE         | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32042        | CONECT          | 700SOUTH         | SCW            | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32120        | CONECT          | 700SOUTH         |                | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14752        | VALVE           | 200 SWSD         |                | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31003        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 114417       | VALVE           | 700SOUTH         | BALL           | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32128        | CONECT          | 700SOUTH         | FLANGE         | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29158        | VALVE           | 700SOUTH         |                | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |

| Component ID | Component Class | Area Description | Component Type | Size Of | Chemical State | Unit     | NOR No. | % Organics |
|--------------|-----------------|------------------|----------------|---------|----------------|----------|---------|------------|
| 30191        | CONECT          | 700 SPHR         | SCW            | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 12766        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31792        | CONECT          | 700SOUTH         | SCW            | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31173        | CONECT          | 700 SPHR         |                | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 12750        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31094        | CONECT          | 700 SPHR         | FLANGE         | 2.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32050        | VALVE           | 700SOUTH         |                | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28590        | CONECT          | 500 EAST         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30175        | CONECT          | 700 SPHR         | SCW            | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 29769        | CONECT          | 700 SPHR         |                | 4.00    | LL             | C-720A/B | 023/082 | > 10%      |
| 32019        | CONECT          | 700SOUTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32038        | CONECT          | 700SOUTH         | PLG            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31949        | CONECT          | 700SOUTH         | SCW            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 14169        | CONECT          | 200 SESD         |                | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12575        | VALVE           | 200 EAST         |                | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29701        | CONECT          | 700 SPHR         |                | 0.50    | GV             | C-720A/B | 023/082 | > 10%      |
| 31493        | CONECT          | 700NORTH         | FLANGE         | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32010        | CONECT          | 700SOUTH         | SCW            | 0.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 13059        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29416        | VALVE           | 500 EAST         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31079        | CONECT          | 700 SPHR         | SCW            | 0.75    | GV             | C-720A/B | 023/082 | > 10%      |
| 30866        | CONECT          | 700NORTH         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 12723        | CONECT          | 200 EAST         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 29993        | CONECT          | 700 SPHR         | FLANGE         | 10.00   | GV             | C-720A/B | 023/082 | > 10%      |
| 24851        | CONECT          | 400 NESD         | FLANGE         | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 50682        | CONECT          | 200 EAST         | FLANGE         | 2.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 14717        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 31526        | VALVE           | 700NORTH         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 20092        | CONECT          | 200 SWSD         | FLANGE         | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32035        | CONECT          | 700SOUTH         | SCW            | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32044        | CONECT          | 700SOUTH         | FLANGE         | 4.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32018        | VALVE           | 700SOUTH         | BALL           | 0.75    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29144        | VALVE           | 700SOUTH         | BALL           | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28457        | VALVE           | 500 EAST         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32145        | CONECT          | 700SOUTH         | PLG            | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 29160        | CONECT          | 700SOUTH         |                | 1.50    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 31875        | VALVE           | 700SOUTH         |                | 2.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 30002        | CONECT          | 700 SPHR         | FLANGE         | 6.00    | GV             | C-720A/B | 023/082 | > 10%      |
| 14692        | CONECT          | 200 SWSD         |                | 3.00    | GV             | CCIN-1/2 | 065/066 | > 10%      |
| 32161        | VALVE           | 700SOUTH         | BALL           | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 32258        | VALVE           | 700SOUTH         | CHECK          | 3.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 28069        | CONECT          | 500 EAST         |                | 1.00    | LL             | CCIN-1/2 | 065/066 | > 10%      |
| 15328        | CONECT          | 200 SWSD         |                | 0.75    | GV             | CCIN-1/2 | 065/066 | > 10%      |

## **Attachment XI.**

### **Compliance Plan**

## **Compliance Plan**

A compliance plan for groundwater monitoring and corrective action is not required for the facility. Therefore, information related to a compliance plan is not included in this section of the application.

## **Attachment XII.**

### **Hazardous Waste Permit Application Fee**

**Attachment XIII.**

**Confidential Material**

**Confidential Material**

No confidential information is being included in this permit application.