Hazardous Waste Permit
Renewal Application

OxyChem
Ingleside, Texas
Permit No. HW-50322
ISWR No. 38280
TXD 982 286 932

Volume 1 of 2

August 2025

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Introduction

This application, which is referenced as Revision 0, August 2025, (with subsequent revision pages being indicated by chronological revision number and date) is submitted by Occidental Chemical Corporation (OxyChem) for renewal of RCRA Permit No. 50322. As such, when this application is approved and the permit re-issued, this application will be a "stand alone" complete application and supersedes all prior applications.

Most changes from the December 2014 application are related to formatting, grammar, typographic error corrections, and similar non-substantive changes. Substantive changes are listed in Table I.1 of the permit renewal application.

The format of this permit renewal application follows the structure specified in the TCEQ's Part B Permit Application document. The footer of each page of the application contains the revision number (i.e., Revision 0) and the revision date (i.e., August 2025). The footer will be adjusted accordingly for subsequent modifications to the application.

The following sections provide additional information related to the contents of this application.

Part A Application

The TCEQ Part A Application form (TCEQ-0283, Rev. 6/03/2022) is included with the attachments for the legal description, USGS map, pictures, and process flow diagram. Due to the number of facility permits and registrations, a separate Table 1 is included that contains the full list of permits for the facility.

Part B Application

As specified in the Bilingual Notice Instructions section of the Part B Application instructions, the Bilingual Notice Confirmation is included in this application.

As specified in the Adjacent Landowners List section of the Part B Application instructions, an adjacent landowners list and map is included in this application. Four (4) sets of printed labels of the name and mailing address for each of the adjacent landowners is included in this application.

As specified in the Plain Language Form and Public Involvement Plan (PIP) section of the Part B Application instructions, Plain Language Summary forms TCEQ-20591 (April 20, 2022) (English)

and TCEQ-20591-esp (Abril 20, 2022) (Spanish) are included. However, Public Involvement Plan form TCEQ-20960 (02-09-2023) is not included because this application is not for a new permit or new registration and no new activities are being proposed.

The TCEQ RCRA Part B Application electronic checklist (TCEQ-00136, Rev. 05-22-17) is included on the flash drive included with this application. The flash drive also includes electronic copies of each section of this application.

Attachment I. - General Information

Table I – General Information is included as Attachment I.A. The TCEQ Core Data Form (TCEQ-10400) (Rev. 11/2022) is included as Attachment I.B. A signature page is included as Attachment I.C. The Interim Status Land Disposal Unit(s) Certification is not applicable and was not signed. An adjacent landowners list and map is included as Attachment I.E. Table I.1 lists any substantial changes that have been made to the previous application and subsequent modifications.

Attachment II. - Facility Siting Criteria

This application is for the renewal of the current permit for the facility. As such, the information related to Unsuitable Site Characteristics as specified in 30 TAC Chapter 335, Subchapter G are addressed in this application. The General Information Report in Attachment V.A of this application addresses each of the specified unsuitable site characteristics. The only unsuitable site characteristic that is potentially applicable is that the facility may be located over the Gulf Coast Aquifer, which is identified as a regional aquifer. However, the facility has secondary containment structures that meet the requirements for sites located above a regional aquifer.

Table II - Facility Siting Criteria Information, is included in Attachment II. The requirements for storage or processing facilities is applicable to the OxyChem facility. The requirements for land treatment facilities, waste piles, storage surface impoundments, landfills, and surface impoundments closed as a landfill are not applicable to the OxyChem facility.

The OxyChem facility is essentially not located within the 100-year flood plain as discussed in Section 6 of the General Information Report in Attachment V.A of this application. There are areas of minimal flooding identified along the facility border with the La Quinta Channel of the Corpus Christi Bay. The remainder of the facility, including all hazardous waste operations, are not located within the 100-year flood plain. The FEMA flood plain maps are included in Appendix C of Attachment V.A of this application.

This application is not for a new hazardous waste management facility or a new commercial hazardous waste management facility. This application is also not for an existing land disposal facility or for permitting of a surface impoundment or landfill. Furthermore, this application does not request a capacity expansion of an existing hazardous waste management facility. As such, the associated additional information is not included in Attachment II.G of this application.

Attachment III. – Facility Management

A listing of all solid waste management sites in Texas that are owned, operated, or controlled by Occidental Chemical Corporation is included in Attachment III.A of this application. This application is not for a new commercial hazardous waste management facility and, therefore, the hazardous waste management experience of the applicant is not included in this application.

The facility training plan is included in Attachment III.B of this application. Facility security is discussed in Attachment III.C of this application. Table III.D, Inspection Schedule, is included in Attachment III.D of this application.

The facility contingency plan is included in Attachment III.E of this application. Table III.E.1 - Arrangements with Local Authorities, Table III.E.2 - Emergency Coordinators, and Table III.E.3 – Emergency Equipment are included in Attachment III.E of this application. The facility does not request any waiver from the preparedness and prevention requirements and, therefore, a justification for such is not included in this application.

This application is not for a new commercial hazardous waste management facility. Therefore, the required Emergency Response Plan is not included in this application.

Attachment IV. – Wastes and Waste Analysis

This application is not for a new hazardous waste management facility or for a capacity expansion at an existing facility. Therefore, Table IV.A – Waste Management Information is not included in Attachment IV.A of this application.

Table IV.B – Wastes Managed in Permitted Units is included in Attachment IV.B of this application. Table IV.C – Sampling and Analytical Methods is included in Attachment IV.C of this application. The facility Waste Analysis Plan is included in Attachment IV.D of this application.

Attachment V. – Engineering Reports

Table V.A – Facility Waste Management Handling Units is included in Attachment V.A. A General Information Report is also included in Attachment V.A that addresses each of the unsuitable site characteristics, includes an overall plan view of the facility, includes a topographic map of the facility, includes other maps and figures related to the facility, including FEMA floodplain maps, and addresses construction schedules.

An engineering report is included in Attachment V.B of this application for the VCM container storage area. Table V.B – Container Storage Area is also included in Attachment V.B of this application. The VCM container storage area engineering report also includes the closure plan and closure cost estimate.

An engineering report is included in Attachment V.C of this application for each of the two permitted storage tanks at the facility: C-720A and C-720B. Table V.C – Tanks and Tank Systems is also included in Attachment V.C of this application.

An engineering report is included in Attachment V.I of this application for each of the two halogen acid furnaces at the facility: CCIN-1 and CCIN-2. The halogen acid furnaces are subject to the Hazardous Waste Combustor MACT regulations in 40 CFR Part 63, Subpart EEE and have demonstrated compliance with the specified air emission standards. However, there are several aspects of the halogen acid furnace operations that require inclusion in the RCRA Permit Renewal application. Table V.I.1 – Boilers/Industrial Furnaces is included in Attachments V.I.1 and V.I.2 of this application. Table V.I.2 – Boiler/Industrial Furnace Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems, Table V.I.3 – Maximum Constituent Feed Rate, Table V.I.4 – Maximum Allowable Emission Rates, and Table V.I.8 – Principal Organic Hazardous Constituents are included in Attachments V.I.1 and V.I.2 of this application, but are considered by the OxyChem facility to be “Not Applicable” to this application as the halogen acid furnaces are subject to the HWC MACT standards and have been issued a Finding of Compliance related to previous performance testing conducted on the units.

The facility does not have any surface impoundments, waste piles, land treatment units, landfills, incinerators, drip pads, miscellaneous units, or containment buildings that require permitting. Therefore, Attachments V.D through V.H and V.J through V.L are not included in this application.

Attachment VI. – Geology Report

This permit renewal application is not for a new hazardous waste management facility, an areal and/or capacity expansion of an existing hazardous waste management facility, or an existing industrial solid waste facility that stores, processes, or disposes of hazardous waste in surface impoundments, landfills, land treatment units, waste piles, or tanks or drip pads which require a contingent post-closure plan. This permit renewal application is also not for a new Compliance Plan or a modification or amendment to an existing Compliance Plan. Therefore, a Geology Report is not required to be included in this application.

Attachment VII. – Closure and Post-Closure Plans

The Facility Closure Plan is included in Attachment VII.A of this application. The Facility Closure Plan includes an overall schedule for the closure activities and a summary of the closure cost estimates. Unit specific closure plans, schedules, and cost estimates are included in the individual engineering reports contained in Attachments V.B.1, V.C.1, V.C.2, V.I.1, and V.I.2 of this application.

All of the hazardous waste management units at this facility will be clean closed and will not require post-closure care. As such, post-closure plans, schedules, and cost estimates are not included in this application.

Table VII.A – Unit Closure, Table VII.B – Unit Closure Cost Estimate, and Table VII.E.1 – Permitted Unit Closure Cost Summary are included in Attachment VII.A of this application.

Attachment VIII. – Financial Assurance

Attachment VIII includes a copy of the Letter of Credit used as the financial assurance for the closure of the facility hazardous waste management units. Attachment VIII also includes a copy of the submittal letter to the TCEQ containing the Certificates of Liability Coverage for 2024 – 2025 for the Ingleside, Texas facility.

As specified in Section VIII.B.II of the RCRA Permit application instructions, a Financial Disclosure Letter is required for permit renewal applications. A copy of the Financial Disclosure Letter is included in Attachment VIII.

Attachment IX – Releases from Solid Waste Units and Corrective Action

Information on releases from solid waste management units and correction action is included in Attachment IX. The facility has completed all investigations and evaluations. In a letter dated January 22, 2003, the TCEQ indicated that the facility had completed all of their SWMU and corrective action obligations.

Attachment X – Air Emission Standards

A report related to the air emission standards is included in Attachment X of the permit application. The facility does not have any process vents, therefore, any required information for process vents is not included in Attachment X. The facility does have equipment, tanks, and containers that are subject to the 40 CFR Part 264 Subpart BB and Subpart CC air emission standards. The required information for equipment leaks, tanks, and containers is included in Attachment X.

The information related to the Subpart BB equipment is included in Appendix B of Attachment X of the application. Table X.C – Tanks, Surface Impoundments, and Containers Subject to Air Emission Controls is included in Attachment X of the application. The Subpart BB and Subpart CC Certification Statements are included in Appendix A and C, respectively, of Attachment X of the application.

The facility does not have a “One-Stop” and does not desire to have the application processed as a “One-Stop” permit. As such, information related to a “One-Stop” permit is not included in the application.

Attachment XI – Compliance Plan

A compliance plan for groundwater monitoring and corrective action is not required for the facility. Therefore, no information is included in Attachment XI of this application for a compliance plan.

Attachment XII – Hazardous Waste Permit Application Fee

Table XII.A – Hazardous Waste Units (For Application Fee Calculation) is included in Attachment XII of the application. Table XII.B – Hazardous Waste Permit Application Fee Worksheet is included in Attachment XII of the application.

Attachment XIII – Confidential Information

No confidential information is included in this permit renewal application.

Part A Permit Application

OxyChem Ingleside Plant

TCEQ Use Only

TCEQ Core Data Form

For detailed instructions on completing this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission (*If other is checked please describe in space provided.*)

☐ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.*)

☒ Renewal (*Core Data Form should be submitted with the renewal form*) ☐ Other

2. Customer Reference Number (*if issued*)	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** (*if issued*)
CN 600125256		**RN 100211176**

SECTION II: Customer Information

4. General Customer Information	**5. Effective Date for Customer Information Updates** (mm/dd/yyyy)	8/14/2025

☐ New Customer ☒ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name (*If an individual, print last name first: eg: Doe, John*) *If new Customer, enter previous Customer below:*

Occidental Chemical Corporation

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** (*if applicable*)
0001889306	11604847324	16-0484732	

11. Type of Customer: ☒ Corporation ☐ Individual Partnership: ☐ General ☐ Limited
Government: ☐ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☐ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☒ 501 and higher

13. Independently Owned and Operated?
☒ **Yes** ☐ **No**

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☐ Owner ☐ Operator ☒ Owner & Operator ☐ Other:
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant

15. Mailing Address:

P.O. Drawer CC

City	Ingleside	**State**	TX	**ZIP**	78362	**ZIP + 4**	

16. Country Mailing Information (*if outside USA*)	**17. E-Mail Address** (*if applicable*)
	[redacted]

18. Telephone Number	**19. Extension or Code**	**20. Fax Number** (*if applicable*)
(361) 776-6310		(361) 776-6240

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (*If 'New Regulated Entity" is selected, a new permit application is also required.*)

☐ New Regulated Entity ☐ Update to Regulated Entity Name ☒ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name (*Enter name of the site where the regulated action is taking place.*)

OxyChem Ingleside Plant								
23. Street Address of the Regulated Entity: ***(No PO Boxes)***	4133 State Highway 361							
	City	Gregory	**State**	TX	**ZIP**	78359	**ZIP + 4**	
24. County	San Patricio							

If no Street Address is provided, fields 25-28 are required.

25. Description to Physical Location:	Located on State Highway 361, approximately 2 miles northwest of the intersection of State Highway 361 and State Highway 1069				
26. Nearest City			**State**	**Nearest ZIP Code**	
Gregory			TX	78359	
Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).					
27. Latitude (N) In Decimal:	27.880833		**28. Longitude (W) In Decimal:**	-97.244167	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
27	52	51	-97	14	39

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
2869	2812	325199	325180

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Organic and Inorganic Chemical Manufactu

34. Mailing Address:	**P.O. Drawer CC**							
	City	**Ingleside**	**State**	**TX**	**ZIP**	**78362**	**ZIP + 4**	
35. E-Mail Address:	[redacted]							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(361) 776-6310		**(361) 776-6240**

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Emissions Inventory Air	☒ Industrial Hazardous Waste
				Permit No. HW-50322 ISWR No. 38280
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Aron Baggett	**41. Title:**	Environmental Manager

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(361 **)** 776-6395		**(** 361 **)** 776-6240	[redacted]

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	Occidental Chemical Corporation	**Job Title:**	Plant Manager		
Name *(In Print)*:	Todd J. Behne			**Phone:**	(361) 776- 6310
Signature:	Todd J Behne			**Date:**	8/11/2025

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: _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[1]: 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_____

[1] 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 _____ 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	See Table 1	TCEQ
2.	Wastewater disposal under the Texas Water Code	See Table 1	TCEQ
3.	Underground injection under the Texas Water Code	N/A	N/A
4.	Texas Clean Air Act	See Table 1	TCEQ
5.	Texas Uranium Surface Mining & Reclamation Act	N/A	N/A
6.	Texas Surface Coal Mining & Reclamation Act	N/A	N/A
7.	Hazardous Waste Management program under the Resource Conservation and Recovery Act	See Table 1	TCEQ/EPA
8.	UIC program under the Safe Drinking Water Act	N/A	N/A
9.	TPDES program under the Clean Water Act	See Table 1	TCEQ/EPA
10.	PSD program under the Clean Air Act	See Table 1	TCEQ/EPA
11.	Nonattainment program under the Clean Air Act	N/A	N/A
12.	National Emission Standards for Hazardous Pollutants (NESHAP) Pre-construction approval under the Clean Air Act	N/A	N/A
13.	Ocean dumping permits under the Marine Protection Research and Sanctuaries Act	N/A	N/A
14.	Dredge or fill permits under section 404 of the Clean Water Act	N/A	N/A
15.	Other relevant environmental permits	N/A	N/A

*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.

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: _____ Date: 08/27/2025

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: _____ 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, _____ 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 August, 2025.

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

_____
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,

Washington, D.C. Use the current edition of the manual.

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:

Item	Attachments	Attachment	Included	Not Included
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[1] of Wastes Received from Off-Site	Processing[2] of Wastes Received from Off-Site	Disposal of Wastes Received from Off-Site	Storage[1] of Wastes Generated On-Site	Processing2[2] of Wastes Generated On-Site	Disposal of Wastes Generated On-Site	Annual Quantity Generated and/or Received
Oil and/or Solvent Contaminated Solids	0106489H 0108407H 0241301H 0301301H	D028, D040 D043, F001 F003, K019 K020, U043 U077				X			2.20
Spent Paint Thinner	0117211H	D001, D035 F003, F005				X			1.23
Waste Paint Solids	0133409H	F003, F005				X			2.87
Waste Oil	0136206H	D001, D028 D040, F001 F002				X			4.07
Waste Resin, Sealant, or Varnish	0138219H 0140209H 0196409H	D001, D003 F003				X			NRG
Fuel Oil Contaminated Water	0177205H	D001, D018				X			NRG
Spent Carbon Canisters and Can Residue	0190404H 0192204H 0196409H	D001, D035 D040, F003				X			NRG
Biosolids	0228491H	F001, F003 F005, F025 K019, K020				X			NRG

[1] "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.

[2] "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[1] of Wastes Received from Off-Site	Processing[2] of Wastes Received from Off-Site	Disposal of Wastes Received from Off-Site	Storage[1] of Wastes Generated On-Site	Processing2[2] of Wastes Generated On-Site	Disposal of Wastes Generated On-Site	Annual Quantity Generated and/or Received
Reboiler Scale	0229407H	D007, D019 D022, D028 D032, D040				X			1.74
EDC Contaminated Material	0238319H	D028, F024				X			41.08
Incinerator Ash/Brick	0242303H 0243319H	F001, F003 F005, F025 K019, K020				X			1.90
VCM Furnace Coke	0244407H	D001, D006 D007, D028 K043				X			22.87
Spent Catalyst	0246393H 0298393H	D028, F001 F003, F005 F025, K019 K020				X			9.33
VCM Trench Material	0247319H	D028, D043 K019, K020 U077				X			1.74
VCM Heavy Ends	0248219H 219H 202H	D001, D007 D019, D021 D022, D027 D028, D029 D032, D033 D034, D036 D039, D040 K019, K020	X	X		X	X		18,954
VCM Contaminated Filters/Carbon	0249310H 0250404H	F025, D043				X			2.96
VCM Light Ends	0251219H 219H	D001, D018 D019, D022 D028, D029 D040, F025	X	X		X	X		0.02
Limestone Sludge	0253306H	F001, F003 F005, F025 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[1] of Wastes Received from Off-Site	Processing[2] of Wastes Received from Off-Site	Disposal of Wastes Received from Off-Site	Storage[1] of Wastes Generated On-Site	Processing2[2] of Wastes Generated On-Site	Disposal of Wastes Generated On-Site	Annual Quantity Generated and/or Received
Residue		F005, F025 K019, K020							
Mother Liquor	0258219H	D001, K019 K020				X			NRG
Incinerator Flue Gas Scale	0289303H	F001, F003 F005, F025 K019, K020				X			0.03
VCM Incinerator Acid	0293105H	D002, F001 F003, F005 F025, K019 K020				X			16,234
EDC Heavy Ends	0339219H 219H 204H	D001, D002 D021, D022 D027, D028 D034, D036 D039, D040 K019	X	X		X	X		NRG
Chlorine Butter, Solids, Elements	0406609H 0405403H 0411319H	D019, D022 D032, D034 D037, D039 D040, D042				X			0.11
Natural Gas Condensate	0504219H	D009, D018				X			NRG
Wastewater Solids/Sand	0276407H 0294319H	F001, F003 F005, F025 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.

Table III-2 – Hazardous Waste Management Unit Checklist

Waste Management Unit	TCEQ N.O.R. Unit #	Status[1]	Design Capacity[2]	Number of Years Utilized	Date in Service
Chlor-Alkali Container Storage Area	006	Closed (2019)	4,400 gallons	30	1989
VCM Container Storage Area	022	Active	9,240 gallons	36	1989
Tank C-720A	023	Active	65,000 gallons	36	1989
Halogen Acid Furnace CCIN-1	065	Active	5,500 lb/hr	34	1991
Halogen Acid Furnace CCIN-2	066	Active	5,500 lb/hr	34	1991
Tank 6D-02	081	Closed (2015)		26	1989
Tank C-720B	082	Active	65,000 gallons	36	1989

[1] Indicate only one of the following: Active, Inactive, Closed, or Proposed
[2] Cubic yards, gallons, pounds, gallons/minute, pounds/hour, BTUs/hour, etc.

Part A Attachment B

Site Legal Description

Legal Description of Facility

BEING 592.751 ACRES OF LAND AND BEING A PART OF A 1674.32 ACRE TRACT CONVEYED IN THREE TRACTS TO E. I. DUPONT DE NEMOURS AND COMPANY, INC.; BY DEEDS OF RECORD IN SAN PATRICIO COUNTY DEED RECORDS AS FOLLOWS: (1) A 336.47 ACRE TRACT FROM KATHERINE ANN HUTCHINS JOHNSON, ET AL, DATED JUNE 15, 1971, RECORDED IN VOLUME 429, PAGE 148; (2) A 651.63 ACRE TRACT FROM J. CARTER GOODLOE, ET AL, DATED APRIL 23, 1971, RECORDED IN VOLUME 426, PAGE 32; (3) 686.22 ACRE TRACT FROM ALBERT J. WHEELER, ET AL, DATED APRIL 23, 1971, RECORDED IN VOLUME 429, PAGE 41, WITH SAID 592.751 ACRE TRACT BEING COMPOSED OF A 6.433 ACRE TRACT OUT OF SAN PATRICIO COUNTY OF TEXAS STATE HIGHWAY NO. 361 SUBJECT TO RIGHTS OF WAY EASEMENTS OF RECORD IN VOLUME 274, PAGES 338 AND 340; DEED RECORDS OF SAN PATRICIO COUNTY, TEXAS, TO BE CONVEYED TO OCCIDENTAL CHEMICAL CORPORATION; A 495.172 ACRE TRACT OUT OF SAN PATRICIO COUNTY, TEXAS, TO BE CONVEYED TO OCCIDENTAL CHEMICAL CORPORATION; A 54.483 ACRE TRACT OUT OF SAN PATRICIO COUNTY, TEXAS, TO BE RETAINED BY E. I. DUPONT DE NEMOURS AND COMPANY, INC., AND LYING WITHIN THE BOUNDS OF SAID 592.751 ACRE TRACT; AND A 36.663 ACRE TRACT OF MOSTLY SUBMERGED LANDS TO BE CONVEYED TO OCCIDENTAL CHEMICAL CORPORATION LYING AND BEING SITUATED IN CORPUS CHRISTI BAY, NUECES COUNTY, TEXAS, AND BEING A PORTION OF THOSE SUBMERGED LANDS AS DESCRIBED BY THREE DEEDS OF MUTUAL CONVEYANCE BETWEEN THE NUECES COUNTY NAVIGATION DISTRICT NO. 1 AND (1) J. CARTER GOODLOE, ET AL, DATED APRIL 22, 1952, AND DULY RECORDED IN VOLUME 178, PAGE 305, SAN PATRICIO COUNTY, TEXAS; (2) MRS. H. S. STILWELL, TRUSTEE, ET AL, DATED APRIL 9, 1952, AND RECORDED IN VOLUME 178, PAGE 295, OF SAN PATRICIO COUNTY, TEXAS; AND (3) NASHVILLE TRUST COMPANY, TRUSTEE, ET AL, DATED APRIL 22, 1952, AND RECORDED IN VOLUME 179, PAGE 196, DEED RECORDS OF SAN PATRICIO COUNTY, TEXAS; WITH SAID 592.751 ACRE TRACT BEING OUT OF THE T. T. WILLIAMSON SURVEYS A-290, A-143, A-292, A-293, OF SAN PATRICIO COUNTY, TEXAS, AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGIN at a concrete monument found in the Southwesterly R.O.W. line of Texas State Highway No. 361 at its point of intersection with the East line of said 686.22 acre tract bearing Dupont Plant coordinates N 11,296.689 and E 8,143.596 and from whence point the Northeast corner of said 592.751 acre tract herein described bears North 1°24'02" West a distance of 117.13 feet with said concrete monument being the PLACE OF BEGINNING of this description;

THENCE, South 1°24'02" East along and with the East line of said 686.22 acre tract a distance of 9,381.32 feet to a concrete monument found at a fence corner for the Southeast corner of said 686.22 acre tract and the Southeast corner of said 592.751 acre tract herein described;

THENCE, SOUTH 88°10'00" West along and with the South line of said 686.22 acre tract a distance of 2,242.15 feet to a 1-3/8" iron rod found in the common line between Nueces and San Patricio Counties, Texas for a corner of this description;

THENCE, SOUTH 74°19'42" West and crossing into the submerged lands of Corpus Christi Bay a distance of 526.94 feet to a point on the Northeast line of Nueces County Navigation District's No. 1 La Quinta Ship Channel as established by said mutual conveyances for the most Southerly corner of this description;

THENCE, North 23°45'14" West along and with the Northeast line of said La Quinta Ship Channel a distance of 1661.42 feet to a point of curvature of said R.O.W. line which has a central angle of 37°19'45", a radius of 3139.93 feet, a tangent of 1060.64 feet, a chord of 2009.72 feet for an arc distance of 2045.71 feet to a point for the most Westerly corner of this description;

*(A/K/A E. I. Du Pont De Nemours and Company)

THENCE, South 01°24'02" East along and with the Easterly line of said 686.22 acre tract a distance of 117.13 feet to the PLACE OF BEGINNING and containing 592.751 acres of land described within these bounds from which 54.483 acres of land will be retained by E. I. Dupont de Nemours and Company, Inc., for a balance of 538.268 acres of land to be conveyed to Occidental Electrochemicals Corporation, more or less.

SAVE AND EXCEPT THE FOLLOWING PIECE OF LAND:

BEING 54.483 ACRES OF LAND OUT OF A 686.22 ACRE TRACT AS SAID 686.22 ACRE TRACT WAS CONVEYED FROM ALBERT J. WHEELER, ET AL, TO E.I. DUPONT DE NEMOURS AND COMPANY, INC., APRIL 23, 1971 AND FILED OF RECORD IN VOLUME 429, PAGE 41, DEED RECORDS OF SAN PATRICIO COUNTY, TEXAS, WITH SAID 54.483 ACRE TRACT BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCE at a concrete monument found in the Southwesterly Right-Of-Way line of Texas State Highway No. 361 with its point of intersection with the East line of said 686.22 acre tract; thence, South 1°24'02" East along and with the East line of said 686.22 acre tract a distance of 4,403.07 feet to a point; thence, North 89°59'45" West a distance of 237.98 feet to a point for the most Easterly Northeast corner and PLACE OF BEGINNING of this description;

THENCE, North 89°59'45" West a distance of 585.50 feet to a point for an interior corner of this description;

THENCE, North 0°00'15" East a distance of 567.82 feet to a point for the most Northerly Northeast corner of this description;

THENCE, North 89°59'45" West a distance of 478.00 feet to a point for the Northwest corner of this description;

THENCE, South 0°00'15" West a distance of 1,277.51 feet to a point for an interior corner of this description;

THENCE, North 89°59'45" West a distance of 2.50 feet to a point for an external corner of this description;

THENCE, South 0°00'15" West a distance of 148.00 feet to a point for an external corner of this description;

THENCE, South 89°59'45" East a distance of 2.50 feet to a point for an internal corner of this description;

THENCE, South 0°00'15" West a distance of 1,459.52 feet to a point for an internal corner of this description;

THENCE, North 89°59'45" West a distance of 50.00 feet to a point for an exterior corner of this description;

THENCE, South 0°00'15" West a distance of 305.70 feet to a point for the Southwest corner of this description;

THENCE, South 89°59'45" East a distance of 536.00 feet to a point for the most Southerly Southeast corner of this description;

THENCE, North 0°00'15" East a distance of 1,217.72 feet to a point for an interior corner of this description;

THENCE, South 89°59'45" East a distance of 577.50 feet to a point for an exterior corner of this description;

THENCE, North 0°00'15" East a distance of 1,405.19 feet to the PLACE OF BEGINNING and containing 54.483 acres of land, more or less.

THENCE, North 74°39'07" East, at 511.10 feet pass the Nueces County/San Patricio County line and in all a distance of 742.21 feet to a point for an exterior corner of this description;

Thence, in an Easterly direction along and with a line that meanders through the E. I. Dupont de Nemours and Company, Inc., plant as follows:

South 44°44'58" East a distance of 279.95 feet to a point;
North 89°53'22" East a distance of 58.57 feet to a point;
South 46°19'58" East a distance of 532.61 feet to a point;
North 89°57'26" East a distance of 67.11 feet to a point;
South 00°09'47" West a distance of 15.14 feet to a point;
North 89°57'48" East a distance of 30.88 feet to a point;
South 00°45'43" West a distance of 6.02 feet to a point;
North 89°18'14" East a distance of 88.81 feet to a point;
North 00°02'16" West a distance of 20.10 feet to a point;
South 89°59'04" East a distance of 66.65 feet to a point;
North 00°00'15" East a distance of 178.63 feet to a point;
South 89°59'45" East a distance of 143.66 feet to a point;
South 00°00'15" West a distance of 56.18 feet to a point;
South 89°59'45" East a distance of 267.16 feet to a point in the West R.O.W. line of Dupont's Fourth Street for an exterior corner of this description;

THENCE, South 00°00'15" West along a line parallel to and 23.38 feet West of the centerline of Dupont's Fourth Street a distance of 712.24 feet to a point for an interior corner of this description;

THENCE, South 89°59'45" East along a line 2.0 feet North of the paved portion of Dupont's Avenue "P" a distance of 1212.64 feet to a point for an interior corner of this description;

THENCE, North 00°00'15" East along a line parallel and 16.01 feet West of the centerline of Dupont's Fifth Street a distance of 2307.06 feet to a point for an interior corner of this description;

THENCE, North 89°59'45" West along a line 2.0 feet South of the paved portion of Dupont's Avenue "K" a distance of 1175.76 feet to a point for an exterior corner of this description;

THENCE, North 00°00'15" East along a line 13.50 feet East of the centerline of Dupont's Fourth Street a distance of 6217.90 feet to a point for a corner of this description;

THENCE, in a Northerly direction as follows:

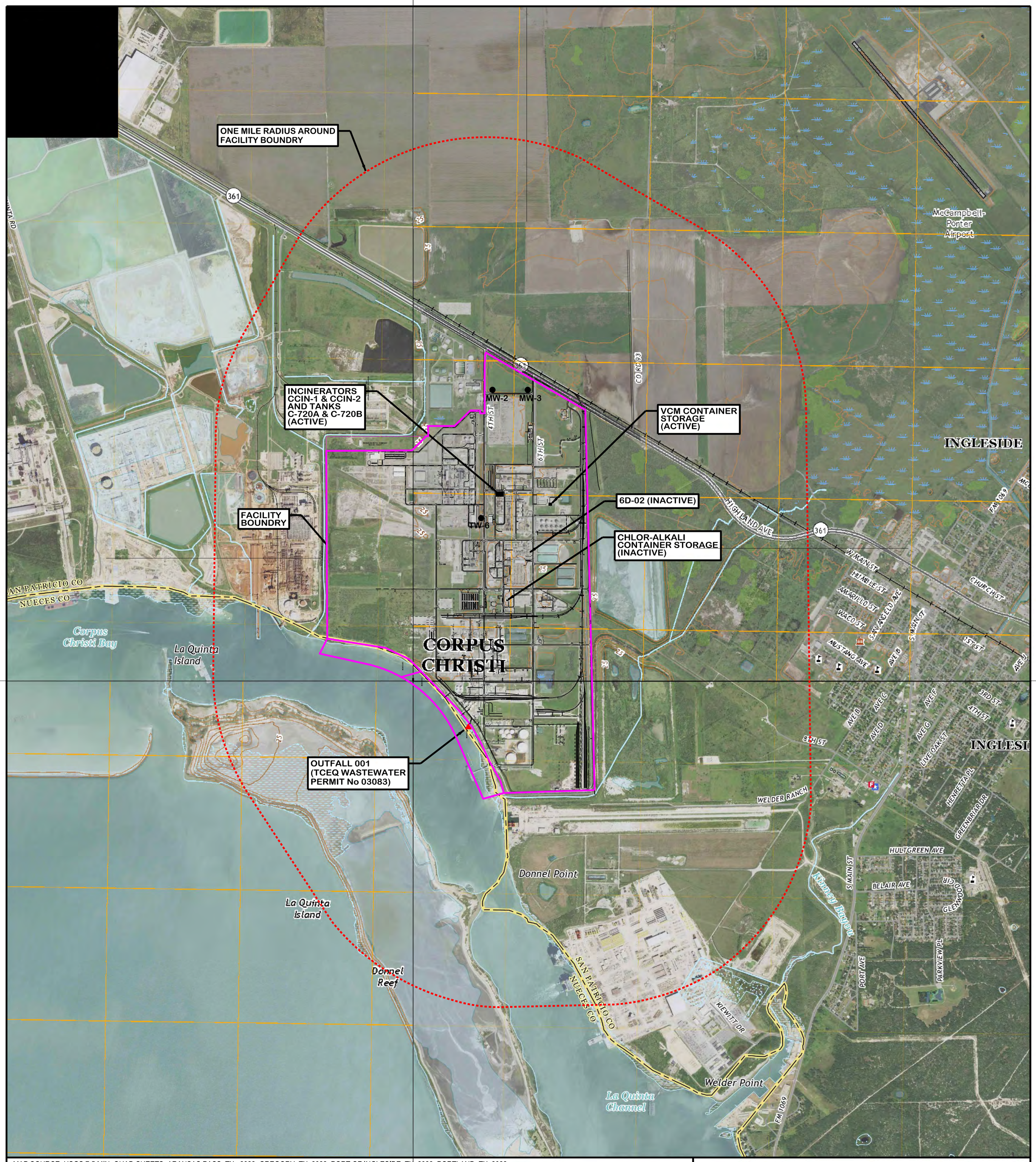
North 24°30'13" East a distance of 29.03 feet to a point;
North 00°00'15" East a distance of 125.65 feet to a point;
North 04°28'52" East a distance of 40.16 feet to a point;
North 14°30'06" East a distance of 28.16 feet to a point;
North 25°17'13" East a distance of 21.18 feet to a point in the existing Southwest R.O.W. line of Texas State Highway No. 361;

THENCE, North 29°58'38" East and crossing into the R.O.W. of Texas State Highway No. 361 a distance of 100.0 feet to a point in the Southwesterly line of an 80.0-foot wide strip of land as conveyed by Birdie Carter Goodloe to the State of Texas as described by deed of record in Volume 146, Page 400, Deed Records of San Patricio County, Texas, and being the most Northerly corner of this description;

THENCE, South 60°01'22" East along a line parallel and 100.0 feet Northeast from the existing Southwest R.O.W. line of Texas State Highway No. 361 and following along and with the Southwest line of said 80.0-foot wide strip of land as conveyed by Birdie Carter Goodloe, and then following along and with the Southwest line of an 80.0-foot wide strip of land as conveyed by Albert J. Wheeler; et al, to the State of Texas by deed of record in Volume 146, Page 404, Deed Records of San Patricio County, Texas, a total distance of 2771.93 feet to a point for the Northeast corner of this 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

NORTH

0 2000

SCALE IN FEET

FACILITY BOUNDARY

ONE MILE RADIUS

OUTFALL LOCATION

MW-2 MONITORING WELL LOCATION AND IDENTIFICATION NUMBER

TEXAS

QUADRANGLE LOCATION

OXYCHEM

DATE: 06/17/2025

FILE: ATT-C-USGSMAP.DGN

ATTACHMENT C
USGS MAP

Part A Attachment D

Photographs

VCM Container Storage Area
(NOR Unit No. 022)

Tanks C-720A and C-720B
(NOR Unit Nos. 023 and 082)

Incinerators CCIN-1 and CCIN-2
(NOR Unit Nos. 023 and 082)

Part A Attachment E

Process Flow Diagram

Attachment E Process Flow Diagram

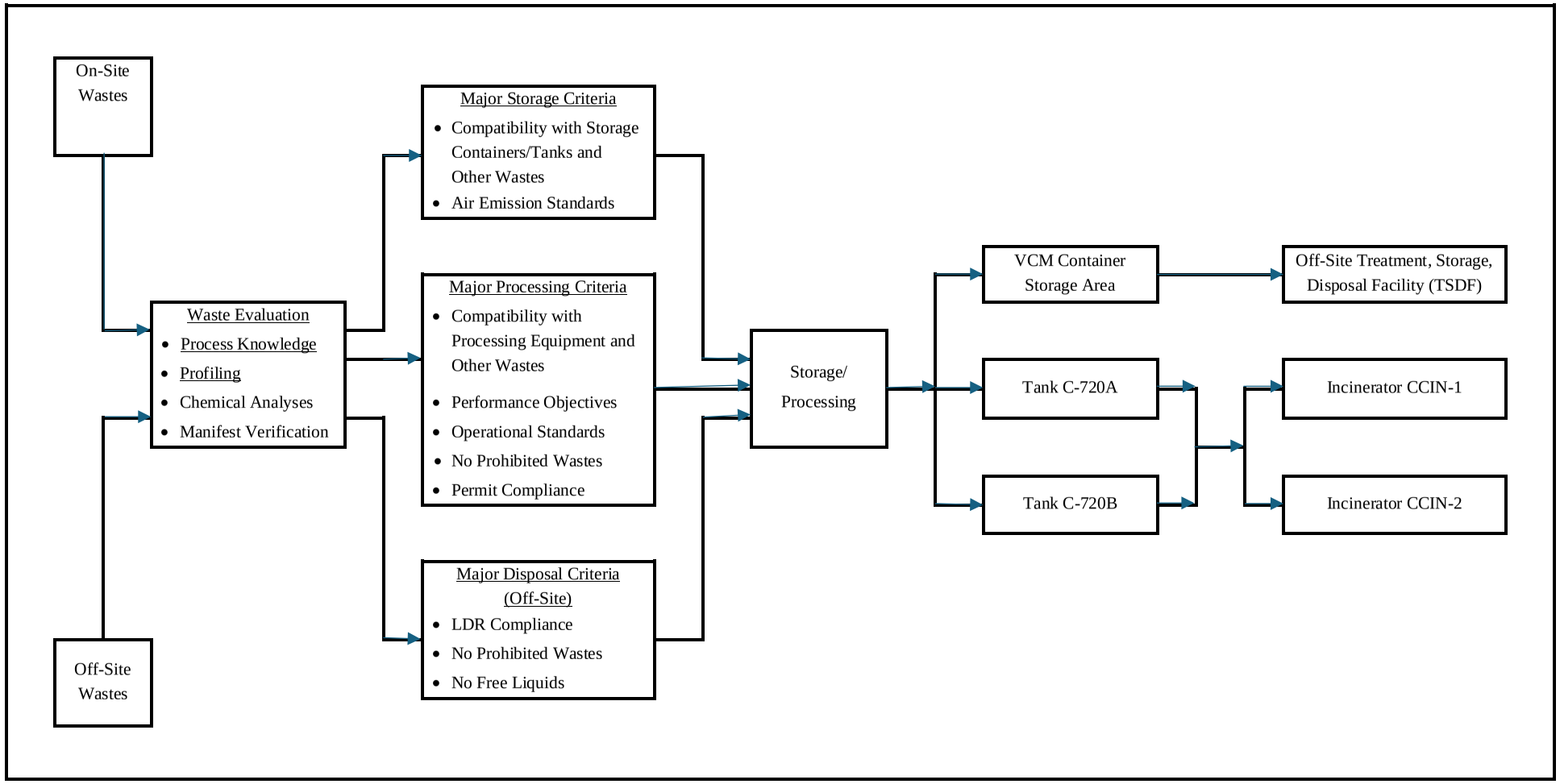


Table 1 Environmental Permits/Registrations/Identifications

Program	Type	ID Number
Air Emissions Inventory	TCEQ Account Number	SD0092F
Air New Source	TCEQ Account Number	SD0092F
Air New Source	EPA AFS Number	4840900044
Air New Source	EPA Permit	GHGPSDTX40M1
Air New Source	EPA Permit	PSDTX1338
Air New Source	EPA Permit	PSDTX1338M1
Air New Source	EPA Permit	PSDTX776
Air New Source	EPA Permit	PSDTX880
Air New Source	EPA Permit	PSDTX880M1
Air New Source	TCEQ Permit	107530
Air New Source	TCEQ Permit	136971
Air New Source	TCEQ Permit	18432
Air New Source	TCEQ Permit	19169
Air New Source	TCEQ Permit	2339A
Air New Source	TCEQ Permit	35335
Air New Source	TCEQ Registration	AMOC12
Air New Source	TCEQ Registration	10922A
Air New Source	TCEQ Registration	11162
Air New Source	TCEQ Registration	11184A
Air New Source	TCEQ Registration	142485
Air New Source	TCEQ Registration	144449
Air New Source	TCEQ Registration	148172
Air New Source	TCEQ Registration	151095
Air New Source	TCEQ Registration	152603
Air New Source	TCEQ Registration	153311
Air New Source	TCEQ Registration	158596
Air New Source	TCEQ Registration	160522
Air New Source	TCEQ Registration	162240
Air New Source	TCEQ Registration	166399
Air New Source	TCEQ Registration	168043
Air New Source	TCEQ Registration	180511
Air New Source	TCEQ Registration	180831
Air New Source	TCEQ Registration	33375
Air New Source	TCEQ Registration	33580
Air New Source	TCEQ Registration	34359

Table 1 Environmental Permits/Registrations/Identifications (continued)

Program	Type	ID Number
Air New Source	TCEQ Registration	71365
Air New Source	TCEQ Registration	74337
Air New Source	TCEQ Registration	79508
Air New Source	TCEQ Registration	82050
Air Operating	TCEQ Account Number	SD0092F
Air Operating	TCEQ Permit	1240
Air Operating	TCEQ Permit	3806
Industrial and Hazardous	EPA ID	TXD 982 286 932
Industrial and Hazardous	TCEQ Permit	50322
Industrial and Hazardous	TCEQ Registration	38280
Pollution Prevention Planning	TCEQ ID Number	P00483
Wastewater	EPA ID Number	TX0104876
Wastewater	TCEQ Permit	WQ0003083000

Part B Permit Application

OxyChem Ingleside Plant

Bilingual Notice Instructions:

For certain permit applications, public notice in an alternate language is required. If an elementary school or middle school nearest to the facility offers a bilingual program, notice may be required to be published in an alternative language. The Texas Education Code, upon which the TCEQ alternative language notice requirements are based, requires a bilingual education program for an entire school district should the requisite alternative language speaking student population exist. However, there may not be any bilingual-speaking students at a particular school within a district which is required to offer the bilingual education program. For this reason, the requirement to publish notice in an alternative language is triggered if the nearest elementary or middle school, as part of a larger school district, is required to make a bilingual education program available to qualifying students and either the school has students enrolled at such a program on-site, or has students who attend such a program at another location to satisfy the school's obligation to provide such a program.

If it is determined that a bilingual notice is required, the applicant is responsible for ensuring that the publication in the alternate language is complete and accurate in that language. Electronic versions of the Spanish template examples are available from the TCEQ to help the applicant complete the publication in the alternative language.

Bilingual notice confirmation for this application:

1. Is the school district of the elementary or middle school nearest to the facility required by the Texas Education Code to have a bilingual program?

   ■ Yes ☐ No

   (**If No**, alternative language notice publication not required)

2. **If Yes** to question 1, are students enrolled in a bilingual education program at either the elementary school or the middle school nearest to the facility?

   ☐ Yes ■ No

   (**IF Yes** to questions 1 and 2, alternative language publication is required; **If No** to question 2, then consider the next question)

3. **If Yes** to question 1, are there students enrolled at either the elementary school or the middle school nearest to the facility who attend a bilingual education program at another location? ☐ Yes ■ No

   (**If Yes** to questions 1 and 3, alternative language publication is required; **If No** to question 3, then consider the next question)

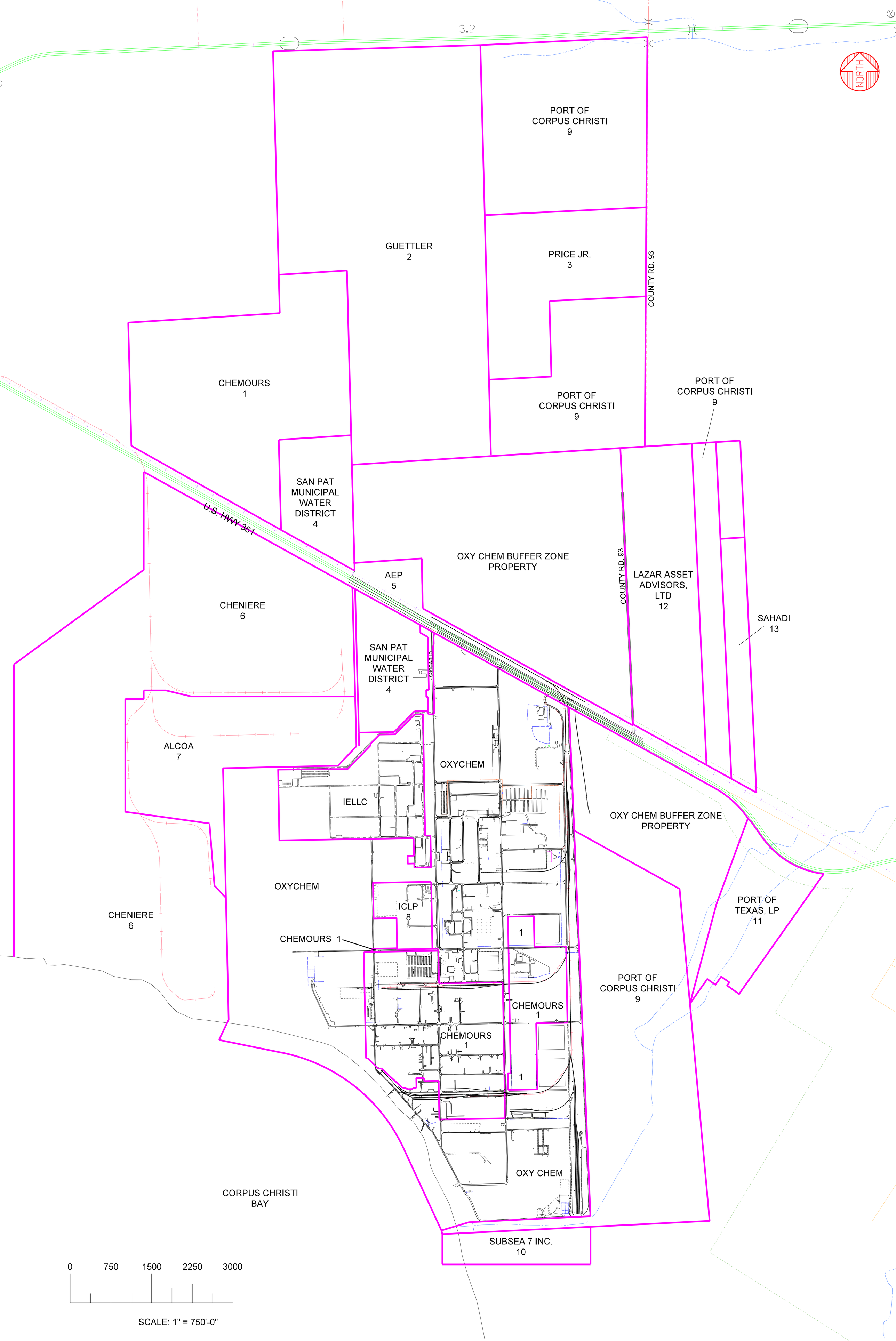
4. **If Yes** to question 1, would either the elementary school or the middle school nearest to the facility be required to provide a bilingual education program but for the fact that it secured a waiver from this requirement, as available under 19 TAC 89.1205(g)?

   ■ Yes ☐ No

   (**If Yes** to questions 1 and 4, alternative language publication is required; **If No** to question 4, alternative language notice publication not required)

If a bilingual education program(s) is provided by either the elementary school or the middle school nearest to the facility, which language(s) is required by the bilingual program?

Spanish



09/11/2023

OXYCHEM INGLESIDE & SURROUND PROPERTY OWNERS

Adjacent Landowners and Land Use
Occidental Chemical Corporation
Ingleside, Texas

1. Chemours Company FC, LLC
(Industrial)
1007 Market Street
Wilmington, DE 19801

2. August Guettler Jr.
(Agriculture)
5778 CR 4241
Taft, TX 78390 -8105

3. James Price
(Agriculture)
4290 County Road 4343
Aransas Pass, TX 78336

4. San Patricio Municipal Water District
(Municipal)
P.O. Drawer S
Ingleside, TX 78362

5. AEP Texas Central Power Company
(Industrial)
P.O. Box 16428
Columbus, OH 43216

6. Cheniere Land Holdings, LLC
(Industrial)
700 Milam Street, Suite 1900
Houston, TX 77002

7. ALCOA
(Industrial)
201 Isabella Street
Pittsburgh, PA 15212-5872

8. Ingleside Cogeneration, LTD
(Industrial)
P.O. Box 27570
Houston, TX 77227

9. Port of Corpus Christi
(Industrial)
P.O. Box 1541
Corpus Christi, TX 78403

10. Subsea 7 (US) Inc.
(Industrial)
17220 Katy Freeway, Suite 100
Houston, TX 77094-1485

11. Port of Texas
(Industrial)
P.O. Box 868
Corpus Christi, TX 78403

12. Lazar Asset Advisors, LTD
(Agriculture)
5949 Sherry Lane, Suite 111
Dallas, TX 75225

13. George Sahadi
(Agriculture)
2813 Bretshire Drive
Corpus Christi, TX 78414-3417

Texas Commission on Environmental Quality

Plain Language Summary

Industrial and Hazardous Waste Permit Applications

Instructions: Complete this form and submit with any industrial hazardous waste, or industrial solid waste, permit application that is subject to 30 Texas Administrative Code §39.405(k) [applications for a Class 3 permit modification, permit amendment, permit renewals, and for a new permit]. Please be concise.

Application Information

Purpose of application: ☐New ☒Renewal ☐Modification/Amendment	
Date Submitted to TCEQ: August 2025	
Customer Name: Occidental Chemical Corporation	
Facility Name: OxyChem Ingleside Plant	
CN: 600125256	**RN:** 100211176
Permit Number: 50322	**Solid Waste Registration Number:** 38280
Facility Street Address: 4133 Highway 361, Gregory, Texas 78359	
Weblink to Street Address:	

Facility Information *(check all that apply)*

What is the primary type of business?	☒Chemical manufacturing ☐ Oil refinery ☐ Treatment, storage or disposal facility plant ☐Other **If other, enter description:**
What does the facility produce?	☒Chemicals ☐Fuels / lubricants ☐No products ☐Other **If other, enter description:**

Waste Management Information *(check all that apply)*

What types of wastes are managed?	☒Nonhazardous industrial ☒Hazardous ☐Other **If other, enter description:**
Where does the waste come from?	☒Off-site source ☒On-site source
How is the waste managed?	☒Storage ☒Process / Treatment ☐Disposal ☐Other **If other, enter description:**
What type of units manage the waste?	☒Active ☐Post-Closure **Type and count:** HCl Furnaces (2), Tank Storage (2), and Container Storage (1)
What happens to waste managed at the facility?	☒Transported off-site ☐Disposed on-site ☒Other **If other, enter description:** Treated in HCl Furnaces

Pollution Control Methods *(check all that apply)*	
How will the facility prevent spills, leaks, and releases?	☒Routine inspections ☐Engineered liner systems ☒Spill containment ☒Proper waste handling ☐Operations in enclosed buildings ☐Groundwater monitoring ☐Other **If other, enter description:**
How will the facility clean up spills, leaks, and releases?	☒Spill clean-up supplies ☒Decontamination equipment ☐Other **If other, enter description:**
How will the facility prevent / minimize air emissions?	☒Air monitoring / control systems ☒Filters / scrubbers ☒Routine inspections ☒Proper waste handling ☐Operations in enclosed buildings ☐Other **If other, enter description:**

Description of Update *(for Class 3 Modifications and Amendments only)*

List and explain any changes this modification or amendment would make to the two sections above—**Waste Management Information** and **Pollution Control Methods**.

Clear Form

Comisión de Calidad Ambiental de Texas

Resumen en Lenguaje Sencillo

Solicitudes de Permisos de Desechos Industriales y Peligrosos

Instrucciones

Complete este formulario y envíe con cualquier solicitud de permiso de desechos industriales peligrosos, o desechos sólidos industriales, que esté sujeta al Código Administrativo de Texas 30 §39.405 (k) [es decir, solicitudes para una modificación de permiso de Clase 3, enmienda de permiso, renovaciones de permisos y para un nuevo permiso].

Sea conciso: toda la información debe caber en dos páginas.

Información de la Solicitud

Propósito de la solicitud:	☐Nuevo	☒Renovación	☐Modificación/Enmienda

Sometido a TCEQ: Agosto de 2025

Nombre del Cliente: Occidental Chemical Corporation

Nombre de la Instalación: OxyChem Ingleside Plant

CN: 600125256	**RN:**100211176
Número de Permiso:50322	**Número de Registro de Desechos Sólidos:** 38280

Dirección de la Instalación: 4133 Highway 361, Gregory, Texas 78359

Enlace Web a la Dirección Postal: Ingrese el enlace que permite al público ver la ubicación física de la instalación

Información de la Instalación *(marque todas lo que correspondan)*

¿Cuál es el tipo principal de negocio?	☒Planta de manufactura química ☐Refinería de aceite ☐ Instalación de tratamiento, almacenamiento o eliminación ☐Otro **Si es otro, introduzca la descripción:** Introduzca la descripción
¿Qué produce la instalación?	☒Químicos ☐Combustibles / lubricantes ☐Sin productos ☐Otro **Si es otro, introduzca la descripción:** Introduzca la descripción

Información sobre la Gestión de Desechos *(marque todas las que correspondan)*

¿Qué tipos de desechos se gestionan?	☒Industrial no peligroso ☒Peligroso ☐Otro **Si es otro, introduzca la descripción:** Introduzca la descripción
¿De dónde provienen los desechos?	☒Fuente externa ☒Fuente interna
¿Cómo se gestionan los desechos?	☒Almacenar ☒Procesar / Tratar ☐Eliminación ☐Otro **Si es otro, introduzca la descripción:** Introduzca la descripción

¿Qué tipo de unidades gestionan los desechos?	☒ Activo ☐ Postcierre **Teclee y cuente:** Hornos de HCl (2), Almacenamiento de Tanque (2), Almacenamiento de contenedores (1)
¿Qué sucede con los desechos gestionados en la instalación?	☒Transportados fuera del sitio ☐Eliminado en el sitio ☒Otro **Si es otro, introduzca la descripción:**Tratados en hornos de HCl

Métodos de Control de la Contaminación *(marque todos los que correspondan)*			
¿Cómo evitará la instalación derrames, fugas y liberaciones?	☒Inspecciones de Rutina	☐Sistemas de revestimiento de ingeniería	☒Contención de derrames
	☒Manejo adecuado de desechos	☐Operaciones en edificios cerrados	☐Monitoreo de aguas subterráneas
	☐Otro **Si es otro, introduzca la descripción:** Introduzca la descripción		
¿Cómo limpiará la instalación los derrames, fugas y liberaciones?	☒Suministros de limpieza de derrames	☒Equipos de descontaminación	
	☐Otro **Si es otro, introduzca la descripción:** Introduzca la descripción		
¿Cómo evitará / minimizará la instalación las emisiones atmosféricas?	☒Sistemas de monitoreo / control de aire	☒Filtros / depuradores	☒Inspecciones de rutina
	☒Manejo adecuado de desechos	☐Operaciones en edificios cerrados	
	☐Otro **Si es otro, introduzca la descripción:** Introduzca la descripción		

Descripción de la Actualización (*solo para Modificaciones y Enmiendas de Clase 3)*
Liste y explique cualquier cambio que esta modificación o enmienda haría a las dos secciones anteriores: **Información de Gestión de Desechos** y **Métodos de Control de la Contaminación**. Introduzca una descripción concisa

Texas Commission on Environmental Quality

Public Involvement Plan Form for Permit and Registration Applications

The Public Involvement Plan is intended to provide applicants and the agency with information about how public outreach will be accomplished for certain types of applications in certain geographical areas of the state. It is intended to apply to new activities; major changes at existing plants, facilities, and processes; and to activities which are likely to have significant interest from the public. This preliminary screening is designed to identify applications that will benefit from an initial assessment of the need for enhanced public outreach.

All applicable sections of this form should be completed and submitted with the permit or registration application. For instructions on how to complete this form, see TCEQ-20960-inst.

Section 1. Preliminary Screening

☐ New Permit or Registration Application

☐ New Activity – modification, registration, amendment, facility, etc. (see instructions)

If neither of the above boxes are checked, completion of the form is not required and does not need to be submitted.

Section 2. Secondary Screening

☒ Requires public notice,

☐ Considered to have significant public interest, **and**

☐ Located within any of the following geographical locations:

- Austin
- Dallas
- Fort Worth
- Houston
- San Antonio
- West Texas
- Texas Panhandle
- Along the Texas/Mexico Border
- Other geographical locations should be decided on a case-by-case basis

If all the above boxes are not checked, a Public Involvement Plan is not necessary. Stop after Section 2 and submit the form.

☒ Public Involvement Plan not applicable to this application. Provide **brief** explanation.

Not an application for a new permit or activity. No significant public interest. Location not listed.

Section 3. Application Information

Type of Application (check all that apply):

Air ☐ Initial ☐ Federal ☐ Amendment ☐ Standard Permit ☐ Title V

Waste ☐ Municipal Solid Waste ☐ Industrial and Hazardous Waste ☐ Scrap Tire
☐ Radioactive Material Licensing ☐ Underground Injection Control

Water Quality

☐ Texas Pollutant Discharge Elimination System (TPDES)

- ☐ Texas Land Application Permit (TLAP)
- ☐ State Only Concentrated Animal Feeding Operation (CAFO)
- ☐ Water Treatment Plant Residuals Disposal Permit

☐ Class B Biosolids Land Application Permit

☐ Domestic Septage Land Application Registration

Water Rights New Permit

☐ New Appropriation of Water

☐ New or existing reservoir

Amendment to an Existing Water Right

☐ Add a New Appropriation of Water

☐ Add a New or Existing Reservoir

☐ Major Amendment that could affect other water rights or the environment

Section 4. Plain Language Summary

Provide a brief description of planned activities.

Section 5. Community and Demographic Information

Community information can be found using EPA's EJ Screen, U.S. Census Bureau information, or generally available demographic tools.

Information gathered in this section can assist with the determination of whether alternative language notice is necessary. Please provide the following information.

(City)

(County)

(Census Tract)
Please indicate which of these three is the level used for gathering the following information.

☐ City ☐ County ☐ Census Tract

(a) Percent of people over 25 years of age who at least graduated from high school

(b) Per capita income for population near the specified location

(c) Percent of minority population and percent of population by race within the specified location

(d) Percent of Linguistically Isolated Households by language within the specified location

(e) Languages commonly spoken in area by percentage

(f) Community and/or Stakeholder Groups

(g) Historic public interest or involvement

Section 6. Planned Public Outreach Activities

(a) Is this application subject to the public participation requirements of Title 30 Texas Administrative Code (30 TAC) Chapter 39?

☐ Yes ☐ No

(b) If yes, do you intend at this time to provide public outreach other than what is required by rule?

☐ Yes ☐ No

If Yes, please describe.

If you answered "yes" that this application is subject to 30 TAC Chapter 39, answering the remaining questions in Section 6 is not required.

(c) Will you provide notice of this application in alternative languages?

☐ Yes ☐ No

Please refer to Section 5. If more than 5% of the population potentially affected by your application is Limited English Proficient, then you are required to provide notice in the alternative language.

If yes, how will you provide notice in alternative languages?

☐ Publish in alternative language newspaper

☐ Posted on Commissioner's Integrated Database Website

☐ Mailed by TCEQ's Office of the Chief Clerk

☐ Other (specify)

(d) Is there an opportunity for some type of public meeting, including after notice?

☐ Yes ☐ No

(e) If a public meeting is held, will a translator be provided if requested?

☐ Yes ☐ No

(f) Hard copies of the application will be available at the following (check all that apply):

☐ TCEQ Regional Office ☐ TCEQ Central Office

☐ Public Place (specify)

Section 7. Voluntary Submittal

For applicants voluntarily providing this Public Involvement Plan, who are not subject to formal public participation requirements.

Will you provide notice of this application, including notice in alternative languages?

☐ Yes ☐ No

What types of notice will be provided?

☐ Publish in alternative language newspaper

☐ Posted on Commissioner's Integrated Database Website

☐ Mailed by TCEQ's Office of the Chief Clerk

☐ Other (specify)

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	270.41 App. I Item A.1
Throughout Application	Correct Typographic Errors	Minor	270.41 App. I Item A.2
III.B – Training Plan	Removed sections for closed and inactive units	Minor	270.41 App. I Item A.1
III.E – Contingency Plan	Updated Emergency Coordinator Information	Minor	270.41 App. I Item B.6.d
V.B.1 – VCM CSA	Updated Closure Costs to 2024 Dollars	Minor	270.41 App. I Item A.1
V.C.1 – C-720A	Revised Closure Schedule	Minor	270.41 App. I Item D.1.b
V.C.1 – C-720A	Updated Closure Costs to 2024 Dollars	Minor	270.41 App. I Item A.1
V.C.2 – C-720B	Revised Closure Schedule	Minor	270.41 App. I Item D.1.b
V.C.2 – C-720B	Updated Closure Costs to 2024 Dollars	Minor	270.41 App. I Item A.1
V.I.1 – CCIN-1	Revise regulatory citations and text from Incinerator to Industrial Furnace	Minor	270.41 App. I Item A.1
V.I.1 – CCIN-1	Revised Closure Schedule	Minor	270.41 App. I Item D.1.b
V.I.1 – CCIN-1	Updated Closure Costs to 2024 Dollars	Minor	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.2 – CCIN-2	Revise regulatory citations and text from Incinerator to Industrial Furnace	Minor	270.41 App. I Item A.1
V.I.2 – CCIN-2	Revised Closure Schedule	Minor	270.41 App. I Item D.1.b
V.I.2 – CCIN-2	Updated Closure Costs to 2024 Dollars	Minor	270.41 App. I Item A.1
VII. – Closure and Post-Closure	Updated Closure Costs to 2024 Dollars	Minor	270.41 App. I Item A.1

Attachment I.A

Table 1 – General Information

Attachment I.B

TCEQ Core Data Form

TCEQ Use Only

TCEQ Core Data Form

For detailed instructions on completing this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission (*If other is checked please describe in space provided.*)

☐ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.*)

☒ Renewal (*Core Data Form should be submitted with the renewal form*) ☐ Other

2. Customer Reference Number (*if issued*)	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** (*if issued*)
CN 600125256		**RN 100211176**

SECTION II: Customer Information

4. General Customer Information	**5. Effective Date for Customer Information Updates** (mm/dd/yyyy)	8/14/2025

☐ New Customer ☒ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name (*If an individual, print last name first: eg: Doe, John*) *If new Customer, enter previous Customer below:*

Occidental Chemical Corporation

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** (*if applicable*)
0001889306	11604847324	16-0484732	

11. Type of Customer: ☒ Corporation ☐ Individual Partnership: ☐ General ☐ Limited
Government: ☐ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☐ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☒ 501 and higher

13. Independently Owned and Operated?
☒ **Yes** ☐ **No**

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☐ Owner ☐ Operator ☒ Owner & Operator ☐ Other:
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant

15. Mailing Address:

P.O. Drawer CC

City	Ingleside	**State**	TX	**ZIP**	78362	**ZIP + 4**	

16. Country Mailing Information (*if outside USA*)	**17. E-Mail Address** (*if applicable*)
	[redacted]

18. Telephone Number	**19. Extension or Code**	**20. Fax Number** (*if applicable*)
(361) 776-6310		(361) 776-6240

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (*If 'New Regulated Entity" is selected, a new permit application is also required.*)

☐ New Regulated Entity ☐ Update to Regulated Entity Name ☒ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name (*Enter name of the site where the regulated action is taking place.*)

OxyChem Ingleside Plant								
23. Street Address of the Regulated Entity: ***(No PO Boxes)***	4133 State Highway 361							
	City	Gregory	**State**	TX	**ZIP**	78359	**ZIP + 4**	
24. County	San Patricio							

If no Street Address is provided, fields 25-28 are required.

25. Description to Physical Location:	Located on State Highway 361, approximately 2 miles northwest of the intersection of State Highway 361 and State Highway 1069				
26. Nearest City			**State**	**Nearest ZIP Code**	
Gregory			TX	78359	
Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).					
27. Latitude (N) In Decimal:	27.880833		**28. Longitude (W) In Decimal:**	-97.244167	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
27	52	51	-97	14	39

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
2869	2812	325199	325180

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Organic and Inorganic Chemical Manufactu

34. Mailing Address:	**P.O. Drawer CC**							
	City	**Ingleside**	**State**	**TX**	**ZIP**	**78362**	**ZIP + 4**	
35. E-Mail Address:	[redacted]							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(361) 776-6310		**(361) 776-6240**

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Emissions Inventory Air	☒ Industrial Hazardous Waste
				Permit No. HW-50322 ISWR No. 38280
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Aron Baggett	**41. Title:**	Environmental Manager

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(361 **)** 776-6395		**(** 361 **)** 776-6240	[redacted]

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	Occidental Chemical Corporation	**Job Title:**	Plant Manager		
Name *(In Print)*:	Todd J. Behne			**Phone:**	(361) 776- 6310
Signature:	Todd J Behne			**Date:**	8/11/2025

Attachment I.C

Signature Page

Signature Page

I, Todd 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: _____ Date: 08/27/2025

- - - -

Interim Status Land Disposal Unit(s) Certification

For all land disposal units managing wastes which are newly listed or identified as hazardous wastes, the following certification must be executed by or on the date 12 months after the effective date of the rule identifying or listing the waste as hazardous. If the operator fails to certify compliance with these requirements, the operator shall lose authority to operate under interim status. [40 CFR 270.73(d)]

I,_____, _____
(operator) *(title)*

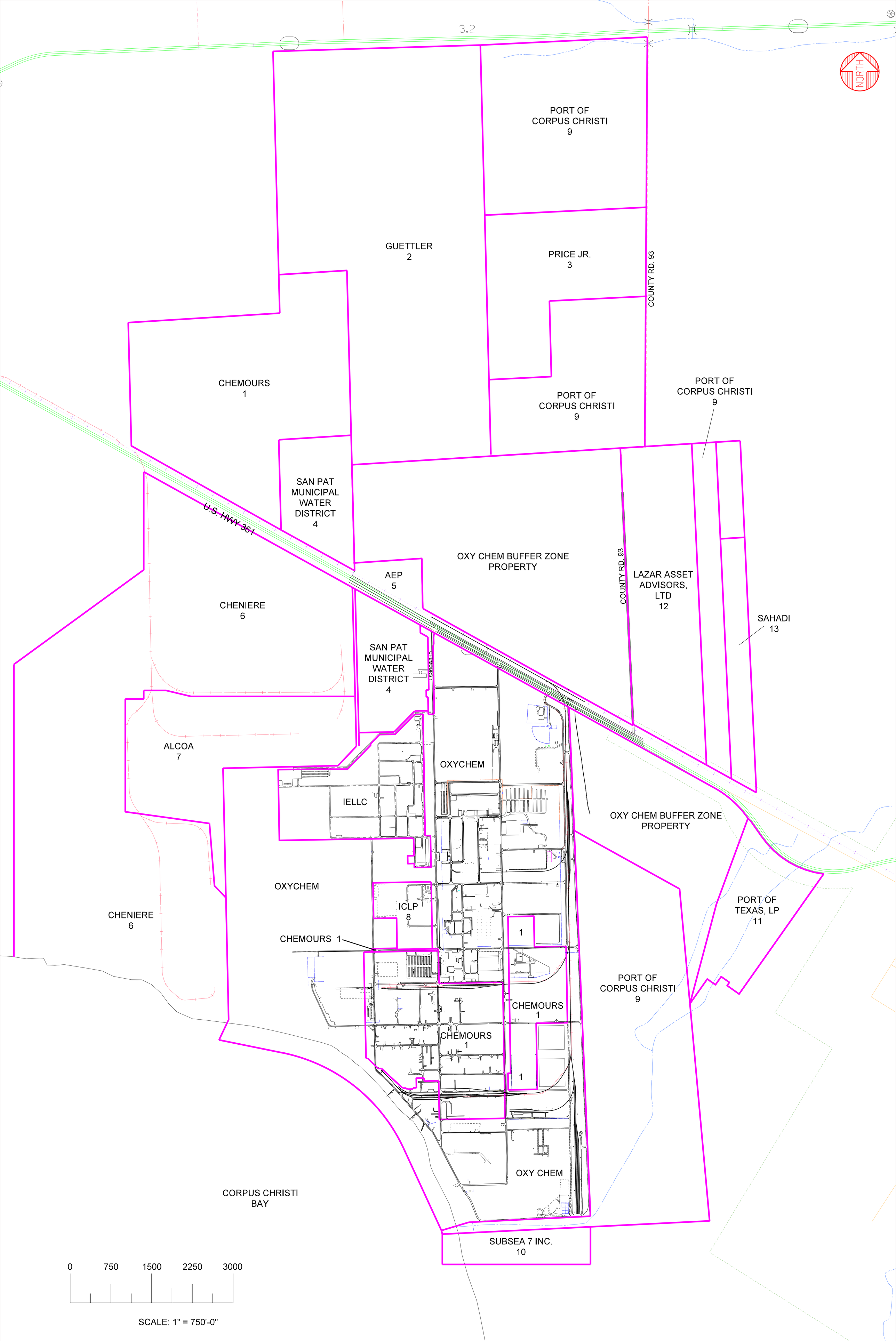
certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete.

I further certify that in accordance with Section 3005(e)(3) of the Resource Conservation and Recovery Act, as amended, the subject land disposal unit(s) are in compliance with all applicable groundwater monitoring and financial responsibility requirements of 30 TAC Sections 335.112, 335.116, and 335.117. I am aware there are significant penalties for submitting false information, including the possibility of civil penalty, criminal fines, and imprisonment.

Signature:_____ Date: _____

Attachment I.E

List and Map of Adjacent Landowners



09/11/2023

OXYCHEM INGLESIDE & SURROUND PROPERTY OWNERS

Adjacent Landowners and Land Use
Occidental Chemical Corporation
Ingleside, Texas

1. Chemours Company FC, LLC
(Industrial)
1007 Market Street
Wilmington, DE 19801

2. August Guettler Jr.
(Agriculture)
5778 CR 4241
Taft, TX 78390 -8105

3. James Price
(Agriculture)
4290 County Road 4343
Aransas Pass, TX 78336

4. San Patricio Municipal Water District
(Municipal)
P.O. Drawer S
Ingleside, TX 78362

5. AEP Texas Central Power Company
(Industrial)
P.O. Box 16428
Columbus, OH 43216

6. Cheniere Land Holdings, LLC
(Industrial)
700 Milam Street, Suite 1900
Houston, TX 77002

7. ALCOA
(Industrial)
201 Isabella Street
Pittsburgh, PA 15212-5872

8. Ingleside Cogeneration, LTD
(Industrial)
P.O. Box 27570
Houston, TX 77227

9. Port of Corpus Christi
(Industrial)
P.O. Box 1541
Corpus Christi, TX 78403

10. Subsea 7 (US) Inc.
(Industrial)
17220 Katy Freeway, Suite 100
Houston, TX 77094-1485

11. Port of Texas
(Industrial)
P.O. Box 868
Corpus Christi, TX 78403

12. Lazar Asset Advisors, LTD
(Agriculture)
5949 Sherry Lane, Suite 111
Dallas, TX 75225

13. George Sahadi
(Agriculture)
2813 Bretshire Drive
Corpus Christi, TX 78414-3417

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[1]:

In wetlands? [as applicable: 30 TAC 335.204(a)(2), (b)(2), (c)(2), (d)(2), and/or (e)(2)	No
If Yes: 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?[6] [as applicable: 30 TAC 335.204(a)(8), (b)(10), (c)(9), (d)(9), and/or (e)(11)]	No
If Yes: 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?2 [30 TAC 335.204(a)(3), (b)(3), (c)(3), (d)(3), and/or (e)(3)]	No
If Yes: 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
If Yes: submit site-specific information in Section V and/or Section VI demonstrating compliance with 30 TAC 335.205(a)(1).	
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
If Yes: 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?[6] [as applicable: 30 TAC 335.204 (a)(6), (b)(7), (c)(6), and/or (e)(8)].	No
If Yes: 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?[6] [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?[6] [as applicable: 30 TAC 335.204(a)(9), (b)(12) ,(c)(11), (d)(11), and/or (e)(13)]	No

If Yes: specify in Section V the design, construction, and operational features that will prevent adverse effects resulting from any fault movement.

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.

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).	

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?	
If Yes: 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.	
If Yes: 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?[6]	
If Yes: 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).	

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	
If Yes: 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.	
If Yes: 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?[6]	
If Yes: 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?	
If Yes: 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?	
If Yes: 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?	
If Yes: 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.	
If Yes: 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?	
If Yes: 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).	

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?[3]	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?[3]	Not Applicable
If Yes: 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)][4]	
If No: 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)][5]	
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?[3, 6]	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

List of Facilities in Texas

Battleground Chlor-Alkali Plant
2800 Park Road 1836
La Porte, Texas 77571

Dallas Silicates Plant
1100 Lenway Street
Dallas, Texas 75215

Deer Park PVC Plant
1000 Tidal Road
Deer Park, Texas 77536

Deer Park VCM Plant
5900 Highway 225, Gate 8A
Deer Park, Texas 77536

Ingleside Plant
4133 Highway 361
Gregory, Texas 78359

La Porte VCM Plant
2400 Miller Cutoff Road
La Porte, Texas 77571

Pasadena PVC Plant
4403 Pasadena Freeway
Pasadena, Texas 77503

Stratos DAC-1 Plant
14991 South Wheeler Road
Notrees, Texas 79741

Oxy – Midland
1600 Gehrig Drive
Midland, Texas 79706

Oxy Permian Ltd.
North Cross Facility
McCamey, Texas 79752

Oxy Block 31 Gas Plant
1501 FM 1601
Crane, Texas 79731

Willard CO_2 Plant
1190 County Road 330
Denver City, Texas 79323

Denver Units CO_2 Recovery Plant
2681 Texas 214
Denver City, Texas 79323

Wasson CO_2 Plant
2582 County Road 355
Denver City, Texas 79323

Wasson Gas Plant
Denver City, Texas 79323

Oxy South Cowden Field Office
3543 FM 1936
Odessa, Texas 79764

Attachment III.B

Training Plan

Attachment III.B

Training Plan

OxyChem
Ingleside, Texas

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1.0 Introduction

In accordance with the requirements of 40 CFR 264.16 and 30 TAC 335.152, OxyChem has developed a training plan that educates facility personnel involved in hazardous waste management duties to perform their duties in a safe and environmentally sound manner, and in accordance with applicable regulations. All employees destined to be involved with hazardous waste management activities will complete the training program within six months of employment or transfer to a hazardous waste management position. Employees will not perform unsupervised hazardous waste management work until this training has been completed.

The training program is designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including where applicable:

1. Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;

2. Key parameters for waste feed cut-off systems;

3. Communications or alarm systems;

4. Response to fires and explosions; and

5. Shut down of operations.

2.0 New Employee Training

New employees at the facility as well as temporary employees are trained according to their job assignment. A training matrix is utilize to determine required/recommended training for new employees. Training requirements for interns or temporary employees are based on project assignment. Training topics on hazardous waste management for new employees (i.e., the outline of initial RCRA training) include the following:

- Purpose;
- Policy;
- Applicable laws and regulations;
- Identification of hazardous waste;
- Waste-specific management procedures;
- Accumulation and storage of waste;
- Labeling requirements;
- Disposal requirements; and
- Emergency procedures, which include:
  - Maintaining emergency response equipment;
  - Key parameters for waste feed cut off systems;
  - Communications and alarm systems;
  - Response to fires or explosions;
  - Response to potential groundwater contamination incidents; and
  - Shutdown of operations.

New employees at OxyChem working with hazardous waste receive training in all aspects of hazardous waste management within 6 months of being assigned to a position of hazardous waste management. Training is administered by a person trained in hazardous waste management procedures and covers both general and specific operating procedures. A proficiency evaluation (e.g., test) may also be administered as part of the training after completion of each training course.

A supervisor, who is skilled in the use and maintenance of equipment in the area, supervises on-the-job training for each employee. Direct supervision by skilled employees is also provided for every new employee, until he/she has completed training requirements.

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 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 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-1 Initial Training Outline for All Hazardous Waste Management Personnel

1.0 GENERAL TRAINING
- General plant policies
- Health and safety policies
- Process description and procedures
- Operating restrictions
- Equipment operation

2.0 SAFETY PROCEDURES
- Personnel safety policies
- Work permits
- Lock/Tag/Try procedures
- Personnel protective equipment
- Respiratory protection
- Plant alarms and communication
- Portable safety equipment
- Fire extinguishers
- Hazard communications procedure
- Hearing conservation procedures

3.0 EMERGENCY PROCEDURES
- Primary emergency organization
- Augmented emergency organization
- Response to releases
- Evacuation procedures
- Notification procedures
- Emergency equipment

4.0 ENVIRONMENTAL GUIDELINES / HAZARDOUS WASTE MANAGEMENT
- Environmental staff, facilities, and function
- RCRA history and purpose
- RCRA regulations summary
- Major provisions of RCRA
    - RCRA permits
    - Definition of hazardous waste
    - Waste management
    - Stream characteristics
    - Segregation
    - Hazardous wastes
    - Storage requirements / facilities

- Inspections
- Contingency plan
- Shipping requirements
- Satellite Accumulation requirements
- Land disposal restriction standards

Table III.B-2 Annual Refresher Training Outline for All Hazardous Waste Management Personnel

1.0 GENERAL TRAINING

- General plant policies
- Health and safety policies
- Process description
- Operating restrictions
- Equipment operation

2.0 SAFETY PROCEDURES

- Plant alarms and communication
- Portable safety equipment
- Fire extinguishers
- Hearing conservation procedures

3.0 EMERGENCY PROCEDURES

- Primary emergency organization
- Augmented emergency organization
- Evacuation procedures
- Notification procedures

4.0 ENVIRONMENTAL GUIDELINES / HAZARDOUS WASTE MANAGEMENT

- Environmental staff, facilities, and function
- RCRA history and purpose
- RCRA regulations summary
- Major provisions of RCRA
    - RCRA permits
    - Definition of hazardous waste
    - Waste management
    - Stream characteristics
    - Segregation
    - Hazardous wastes
    - Storage requirements / facilities
    - Inspections
    - Contingency plan
    - Shipping requirements
    - Satellite Accumulation requirements
    - Land disposal restriction standards

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 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 incinerators
- Environmental operating guidelines
    - Stack emissions
    - Inspections
    - Tank inventory check
    - Drum / container management

6.0 EMERGENCY PROCEDURES

- Emergency equipment
- 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

4.0 Job Description

The job positions that may be involved with the management of hazardous waste are described as follows. They include a brief description of job duties, requisite skills, and education.

Plant Manager

The Plant Manager of the OxyChem Plant in Ingleside, Texas directs the operation of the plant in a manner that will minimize or eliminate the production of hazardous waste, protects human health and the environment, and ensures that all operations are in compliance with applicable environmental regulations. All other positions in the plant report directly or indirectly to the Plant Manager.

Minimum qualifications include a B.S. degree in engineering or a relevant field and at least 10 years experience in chemical plant processes.

Assistant Plant Manager

The Assistant Plant Manager directs all production, maintenance, and technical personnel at the plant. Minimum qualifications include a B.S. degree in engineering or a relevant field and at least 8 years experience in chemical plant processes.

Safety Manager

The Safety Manager directs Industrial Hygiene and safety engineering at the plant, and reports to the Plant Manager. Minimum qualifications include a B.S. degree in engineering or a relevant field and at least 8 years experience in chemical plant processes.

Environmental Manager

The Environmental Manager, who reports to the Plant Manager, is responsible for all environmental concerns of the plant. He/She heads the Environmental Group. Minimum qualifications include a B.S. degree in engineering or relevant field and 3 years experience.

Environmental Superintendent

The Environmental Superintendent, who reports to the Environmental Manager, provides environmental support to the Ingleside site. Ensures environmental compliance for Air, Water, RCRA, and SARA reporting.

Minimum qualifications include a B.S. degree in engineering or relevant field and 3 years experience.

Environmental Engineer

The Environmental Engineer, who reports to the Environmental Superintendent, provides guidance and advice to managers and supervisors on the treatment, storage, and disposal of hazardous and non-hazardous waste. He/She ensures that 1) appropriate procedures are followed to minimize or eliminate emissions that would be harmful to human health and environment; and 2) plant management is aware when operations need to be modified to stay in compliance with all applicable environmental laws and regulations. He/She is responsible for submitting required environmental reports to regulatory agencies and working with the Corporate Environmental personnel.

He/She works with the Plant Training Supervisor in developing training programs for the management of hazardous wastes and assists in training of employees who manage hazardous waste.

Minimum qualifications include a B.S., A.S., or M.S. degree in engineering or a relevant field. He/She must be knowledgeable in RCRA regulations and requirements and must participate regularly in RCRA training programs.

VCM Environmental Supervisor

The VCM Environmental Supervisor, who reports to the VCM Production Superintendent (who reports to the VCM Operations Manager), is responsible for day-to-day safety and environmental compliance of the VCM Plant. Specific responsibilities include:

- Routine review of safety and environmental records and logs; and
- Management and supervision of management of containers in the VCM and Limestone Sludge Container Storage areas.

Minimum qualifications include a high school diploma, 10 years of industrial plant operating experience (10 years desired, not currently required), particularly in production and maintenance areas, and good communication skills.

Plant Training Supervisor

The Plant Training Supervisor has the responsibility of maintaining the training records of employees, both classroom and on-the-job training.

Minimum qualifications include a high school diploma, at least 5 years plant experience, and excellent communication skills.

VCM Operations Manager

The VCM Operations Manager is responsible for providing the supervisors with the proper procedures for operating the VCM plant including the hazardous waste management units in this area. He/She coordinates with the Environmental Engineer (responsible for waste management activities) to ensure that the units are operating in accordance with all applicable environmental regulations. He/She is responsible for maintaining the equipment in good condition and ensuring that operators perform this work in the prescribed manner.

Minimum qualifications include a B.S. degree in engineering or a relevant field and at least 7 years plant process experience.

Operations Superintendent, Shift, and Day Area Supervisors

The superintendent and supervisors provide supervision, training, and overall coordination of activities within the department. They inform the plant operators of the proper procedures for operating the hazardous waste management units and managing hazardous wastes.

Minimum qualifications for a superintendent include a B.S. degree in engineering or a relevant field and 5 years of plant process experience. The minimum qualifications for a supervisor include a high school diploma and at least 7 years plant process experience.

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 incinerators. His/Her work is directed by the Shift Supervisor.

The Incinerator Technician: 1) initiates process changes, as needed, to operate the 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.

The VCM Incineration Technician is responsible for the tank farm area which includes the hazardous waste storage tanks C-720A and C-720B. The fill and pump-out equipment for these tanks are also the responsibility of this technician. The technician:

- Operates the valving and process equipment in the tank area so as to provide safe and environmentally secure containment, storage, and transfer of the process waste materials in the department;
- Maintains records relating to levels and flows of the tanks;
- Inspects the area to insure compliance with safety and environmental regulations;
- Obtains samples and processes them as needed to provide adequate operating records for the area;
- Initiates work orders for equipment repair;
- Monitors area access and writes permits for work entry as needed;
- Communicates the status of the area to other operators and to supervision; and
- Assists in training other operators for qualification in this area.

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

VCM Container Storage Technician

The VCM Container Storage Technician is responsible for the container storage areas. The technician:

- Has overall responsibility for maintaining the hazardous waste container storage areas;
- Inspects the areas at least weekly to ensure proper labeling and storage of containers;
- Inspects each containment system to ensure structural integrity; and

- 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

Job Title	Required Introductory Training	Required Annual Training	Required Periodic Training[1]
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 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 Table III.B-3	Table III.B-2	Table III.B-3
VCM Container Storage Technician	Table III.B-1 Table III.B-3	Table III.B-2	Table III.B-3

5.0 Training Documentation

Training documentation will be kept for each employee involved in hazardous waste management at the OxyChem plant. All RCRA training records will be maintained until closure of the RCRA units is completed and certified. Records on former employees will be kept for a minimum of three years from their termination date. Applicable training records for any employee transferred from another OxyChem plant will be secured by the Plant Training Supervisor or his designee for incorporation into the Ingleside plant's RCRA training files.

The following documents and records are maintained at the Ingleside Plant as a part of the RCRA operating records:

- Job title and employee name for each hazardous waste management position;
- Written job description, including requisite skill, education and other qualifications and duties for positions related to hazardous waste management;
- Written description of the type and amount of both introductory and continuous training to be provided to each position related to hazardous waste management; and
- Records that document training courses completed by each employee involved with hazardous waste management.

Attachment III.C

Security

Attachment III.C

Security

OxyChem
Ingleside, Texas

A fence or natural barrier surrounds the combined OxyChem/Dupont site. The fence surrounds all sides of the complex. The fence is a 6-foot chain link fence topped with strands of barbed wire. In addition, the southern boundary of the plant has a natural barrier, the La Quinta Channel.

Security guards, supervisors, and operating personnel are on site 24-hours per day. Security guards provide perimeter control. An intrusion detection system is attached to the facility's perimeter fence that automatically alerts security if anything comes in contact with the fence.

Two 24-hour manned electric gates control access to the plant. All other gates are locked or access controlled and checked periodically by security patrol. Numerous security cameras exist throughout the facility and are monitored from each guard house.

Each hazardous waste management site is identified with a warning sign providing identification of the equipment as a hazardous waste unit. In addition, "Danger - Unauthorized Personnel Keep Out", or similar worded, signs are posted.

Attachment III.D

Inspection Schedule

Table III.D. – Inspection Schedule

Facility Unit(s) and Basic Elements	Possible Error, Malfunction, or Deterioration	Frequency of Inspection
Container Storage Area		
Containers	Signs of leakage or significant corrosion	Weekly
	Properly closed and labeled	Weekly
Storage Area	Segregation of incompatible wastes	Weekly
	Adequate aisle space is present	Weekly
Secondary Containment	Structural issues (e.g., damages, etc.)	Weekly
Industrial Furnaces		
External components (e.g., shell of unit, piping, flow meter, ID fan, scrubber, knockout drum, ESP, oxidizer, waste feed lines, etc.)	Leaks, breaks, significant cracks, corrosion, or deterioration	Daily
Flame scanners and burner nozzles	Verify signal and flame pattern	Daily
O_2 and CO concentrations	Calibration drift/response time and relative wear	Daily (autocal), annual (relative accuracy test)
Automatic waste feed cutoffs/alarms	Verify status lights and device responses	Weekly
Internal components (e.g., refractory material, structural components, etc.)	Structural damages	Periodic
Tanks		
External components (e.g., shell of unit, pumps, piping, components, signs, area lighting, etc.)	Leaks, breaks, significant cracks, corrosion, or deterioration	Daily
Transmitters	Level measurement and functionality	Daily
Secondary containment	Presence of fluids, structural issues (e.g., damages, etc.)	Daily
Ultrasonic thickness testing	Wall thickness	Every 5 years

final

Table III.D. – Inspection Schedule

Facility Unit(s) and Basic Elements	Possible Error, Malfunction, or Deterioration	Frequency of Inspection
Security		
Fence	Missing sections, significant damage, deterioration, or corrosion	Annually
Gates	Missing sections, locks present (as applicable), significant damage, deterioration, or corrosion	Annually
Warning signs	Legibility, deterioration	Annually
Safety and Emergency Equipment (associated with hazardous waste management areas only)		
Communication/alarms	Functionality	Monthly
Fire extinguishers	Damaged, missing seal, inadequate pressure, missing inspection tag	Monthly
Safety showers	Poor operation, inadequate pressure, obstructed	Monthly
Personal protective equipment	Not present, damaged	Monthly
Fire water supply pumps	Flow and pressure	Quarterly

Attachment III.E

Contingency Plan

Table III.E.1 – Arrangements with Local Authorities

Police – San Patricio County Sheriff's Office

Address	300 North Rachal, Sinton, Texas 78387
Person Contacted	Leroy Moody
Phone Number	(361) 364-2251
Agreed Arrangements	Roadblocks and community notification, if needed, and contact point for the Local Emergency Planning Committee

Fire – Ingleside Fire Department

Address	2425 Eighth Street, Ingleside, Texas 78362
Person Contacted	R.J. Thomas
Phone Number	(361) 776-7422
Agreed Arrangements	Supplement OxyChem personnel in responding to a fire or other emergency situation

Hospital – Christus Spohn

Address	1702 Santa Fe, Corpus Christi, Texas 78404
Person Contacted	Mark Casanova
Phone Number	(361) 881-3000
Agreed Arrangements	Medical services for persons injured during emergency events

Other

Organization Name	San Patricio County Emergency Management
Address	300 North Rachal, Sinton, Texas 78387
Person Contacted	William Zagorski
Phone Number	(361) 364-9653
Agreed Arrangements	Coordination of services during an emergency event

Attachment III.E

Contingency Plan

OxyChem
Ingleside, Texas

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1.0 Purpose and Implementation of the Contingency Plan

This contingency plan is designed to minimize hazards to human health and the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to the air, soil, or surface water from the Occidental Chemical Corporation (OxyChem) plant in Ingleside, Texas. The provisions of the plan will be carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents that could threaten human health or the environment. The plan addresses the requirements of the federal Resource Conservation and Recovery Act (RCRA) regulations contained in 40 CFR Part 264, Subpart D, and Texas Commission on Environmental Quality (TCEQ) regulations contained in 30 TAC Part 335, Subchapter F.

For the purpose of this plan, hazardous waste-related events that warrant activation of the Contingency Plan are grouped into three categories. These are:

- Minor event releases, which is believed to pose a hazard and affects personnel within the immediate area, but is believed not to impact other areas within the OxyChem complex;
- Medium event releases, which is believed to pose a hazard and affects personnel in areas that are outside of the immediate area of the release, yet within the OxyChem complex; and
- Major event release, which is believed to pose a hazard and affects personnel and property outside of the OxyChem complex.

2.0 Responsibilities

OxyChem has developed an in-plant emergency response organization to respond to a fire, explosion, or hazardous release. The organization is based off the National Incident Management System (NIMS) issued in 2004 by the Federal Emergency Management Agency. NIMS is based on the National Interagency Incident Management System (NIIMS). The Incident Command System (ICS) is an organized system of roles, responsibilities and procedures for the command and control of emergency operations. It is a procedure-driven system based upon the same business and organizational management principles which govern organizations on a daily basis. The ICS has been established by the NIMS as the standardized incident organizational structure for the management of all incidents. NIMS consists of sections which have function responsibilities for primary segments of emergency operations. Sections are under the command of a Section Chief who reports directly to the Incident Command (IC). Sections are only activated when corresponding functions are required by the incident. This organization provides first-line continuous capabilities for response activities. It consists of five sections in the plant:

- Command;
- Operations;
- Planning;
- Communications; and
- Logistics.

Duties and responsibilities for each of these groups are described in the plant's ERP.

An individual trained in incident command is in charge of a site incident until a senior official with command level training formally assumes command.

3.0 Incorporation of Existing Facility Plans

OxyChem has developed a site-specific ERP that contains policies and procedures for the plant, such as safety and emergency plans for response to hurricanes and hazardous releases. The ERP is incorporated by reference with respect to its emergency response procedures and protocols (e.g., incident command system, LEPC coordination, etc.) as they relate to hazardous waste-related event that may result in implementation of emergency responses. Since the ERP is much more inclusive in its scope of coverage, it is not included as an attachment to the Contingency Plan to minimize the regulatory burden of minor updates (e.g., changes in specific personnel, phone numbers, etc.) that routinely occur.

4.0 Arrangements for Emergency Services

The OxyChem plant maintains its own Emergency Response Team for response to fires and spills. Details on this organization are presented in the Emergency Response Plan. OxyChem also operates an on-site first-aid clinic. This clinic is equipped with medical supplies necessary to respond to minor emergencies. In addition to these in-house capabilities, OxyChem has made informal emergency response arrangements with several local authorities including local hospitals, an ambulance service, and the sheriff's office. Table III.E-1 presents a list of agencies that have been familiarized with OxyChem's facility and their phone numbers.

Although OxyChem would be the primary responder to contingency events occurring within its facility, a Mutual Aid Agreement is in place in case outside assistance is needed; for example, the plant's major emergency equipment systems were being used to their limits or were unavailable for use. Local area responders, under the San Patricio County Emergency Plan, would provide secondary response. OxyChem also has agreements in place with selected Hazardous Material Contractors. Another entity in the Corpus Christi Area that would be available on a delayed response is the Refinery Terminal Fire Company (RTFC). RTFC requires approval of a member of the board of directors and a signed purchase agreement to respond to nonmember companies.

Christus Spohn Hospital Shoreline and Christus Spohn Memorial Hospital in Corpus Christi will provide emergency medical assistance, if needed.

"Tri-County Emergency Medical Service" in Ingleside provides ambulance service. OxyChem also has an outside physician on retainer. Selected on-shift Emergency Response Personnel (certified by the American Red Cross) are trained to handle medical emergencies.

The San Patricio County Sheriff's Office will provide roadblocks and community notification, if needed. San Patricio County has an agreement with the City of Corpus Christi who runs the regional communities alert system. The Sheriff's Office also serves as the contact point for the SARA - Local Emergency Planning Committee.

During an emergency, which requires outside assistance, the local authorities will be contacted from the plant's Emergency Control Centers (either the Chlor-Alkali, Cogeneration, Ethylene or VCM Control Rooms or the EOC if activated).

Table III.E-1 Local Authorities

Agency	Phone Number
San Patricio County Emergency Management	361-587-3560
Local Emergency Planning Committee (Non-Emergency) (Contact County Dispatch 911 For Emergency Notifications)	361-364-9600 361-364-2251 (back-up)
San Patricio County 911 Dispatch for the ambulance, Fire, Hazmat, Community alerts, and Sheriff's Office	9-911
San Patricio County Sheriff's Office (Non-Emergency Number)	361-364-9600
Ingleside Fire Department (Non-Emergency Number)	361-776-7422
Portland Fire Department (Non-Emergency Number)	361-643-0155
Christus Spohn Hospital Shoreline - Corpus Christi Emergency Room	361-881-3000 361-881-3811
Christus Spohn Memorial Hospital Emergency Room	361-902-4000 361-902-4161
Tri-County Ambulance Service (Non-Emergency Number)	361-776-0025
TCEQ Region 14 Office	361-825-3100 (Days) 1-800-832-8224 (24-hrs.)

5.0 Emergency Response Coordinator

5.1 Responsibilities

The Incident Commander is responsible for coordinating all emergency response measures at the OxyChem plant. The on call Emergency Response Coordinator will be called in the event of a Level 2 or 3 type event for assistance. Therefore, the Emergency Response Coordinator must be on the premises or on-call and capable of quick arrival at all times. The Incident Commander and/or Emergency Response Coordinator have the authority to commit company resources to carry out the contingency plan and are thoroughly familiar with:

- All aspects of the contingency plan;
- All operations and activities at the facility;
- Location and characteristics of wastes handled;
- Location of all records within the facility; and
- The facility layout.

5.2 Designation and Qualifications of Emergency Response Coordinator

During an emergency, which entails implementation of the Contingency Plan, an on-duty individual trained in incident command will act as both the Incident Commander and Emergency Response Coordinator until the arrival of the designated Emergency Response Coordinator, or in the Coordinator's absence, either of three Operations Managers (Chlor-Alkali/Cogeneration, Ethylene, or VCM). At that time, the Emergency Response Coordinator function will be transferred to the appropriate Emergency Response Coordinator / Operations Manager. The appropriate Emergency Control Center will serve as the home base for the Emergency Response Coordinator.

The position of Operations Manager requires an engineering degree and extensive experience in operations and engineering.

The Incident Commander (IC) is the individual present who has been trained and authorized to coordinate the response activities of all responders from an overall strategic position. This individual must be familiar with the local Emergency Response Plan, understand response procedures and techniques, and have thorough knowledge and understanding of the response capabilities that are available.

The current Emergency Response Coordinator and alternates are:

Primary	Name & Business #	Home Address and Telephone Number
Safety Superintendent	Darren Rudowsky (361) 775-7274	6317 Legacy Point Corpus Christi, TX 78414 (361) 929-6690
Alternates		
Assistant Plant Manager	William Griffith (361) 776-6168	106 Alta Plaza Corpus Christi, TX 78411 (205) 587-6929
Assistant Plant Manager	Adam Brewer (361) 776-6161	176 James Road Tivoli, TX 77990 (361) 222-9023

6.0 Emergency Response Procedures

6.1 Notification Procedures

6.1.1 Internal Notification

It is the responsibility of the person witnessing an emergency to notify the Chlor-Alkali, Cogeneration, Ethylene, or VCM Control Rooms by any means possible. The following methods are available to report an emergency condition:

- Telephone: Dial 5555 (total plant);
- Portable radio to area control room (total plant);
- Voice Alarm System (VAS);
- Public Address (PA) announcements;
- Verbal report; or
- Fire alarm pull stations (VCM & Ethylene).

The individual that initiates any type of field emergency alarm should be prepared to notify the Control Room Technician of the following:

- Name;
- Type of emergency;
- Magnitude of emergency; and
- Area affected.

The Voice Alarm System (VAS), which is backed up by PA and "All Call" radio announcements, will serve to broadcast plant emergency alarms and emergency instructions. Emergency broadcasts may be in the form of preselected alarm tones, preprogrammed digitized information, spontaneous verbal instructions, or any combination of these. Members of the on-site ERT are notified through the VAS and radio communication.

The key to the emergency broadcast system is the Voice Alarm System (VAS), which continually monitors the alarm pushbutton stations in the VCM plant. Emergency events are automatically reported simultaneously to the four plant control rooms and are broadcasted over the PA speakers.

The Control Room Technician receiving an emergency report is responsible for activating the VAS.

Voice Alarm Signals

Audible Tone	"Voice" Nature of Emergency	"Voice" Location
Siren	Fire	Digitized
Whoop	Chemical Release	Voice
Yeow	Medical Emergency	Message
High-Low	Plant Wide/Type	
Chime	All Clear	

The Shift Supervisor on duty at the time of the incident will be made aware of the incident through the internal reporting and broadcasting procedures. If the incident occurs during the day shift, the designated Emergency Response Coordinators will be alerted through the same means. If the incident occurs during a time other than during the day shift, an individual trained in Incident Command will temporarily function as Emergency Response Coordinator. The Coordinators, or someone at the Coordinator's direction, will notify the appropriate Operations Manager at home, in the event of a medium or major release.

6.1.2 External Notification

If the Incident Commander and/or Emergency Response Coordinator determine that the facility has experienced a release, fire, or explosion that could threaten human health or the environment outside of the facility, the Coordinator will report the finding as follows:

1. If assessment indicates that evacuation of local areas may be advisable, the Coordinator will immediately notify appropriate local authorities (i.e., San Patricio County — 911 System). Specific procedures for alerting local agencies are presented in the ERP.2. The Coordinator will immediately notify the TCEQ at (361) 825-3100 (8:00 a.m. to 5:00 p.m. weekdays) or 1-800-832-8224 (after 5:00 p.m. or on weekends or holidays) according to procedures set out in the Spill Avoidance and Management Plan for Hazardous Substances and Oil. When warranted, the Emergency Response Coordinator will also notify the National Response Center using their 24-hour, toll-free number (800/424-8802). The oral report will include:

   (i) Name and telephone number of the reporter;
   (ii) Name and address of facility;

(iii) Date, time, duration, and type of incident (e.g., release, fire);
(iv) Name and quantity of material(s) involved, to the extent known;
(v) The source and exact location of the spill;
(vi) The extent of injuries if any;
(vii) The name and telephone number of the party at the plant who is in charge of operations;
(viii) The steps taken or proposed to contain and clean up the spilled material;
(ix) An assessment of actual or potential hazards to the environment and human health; and
(x) Identity of any government representatives (including local) responding.

The Emergency Response Coordinator or delegated individual will notify any other local agencies whose assistance may be needed either by phone or by radio. A list of agencies that may potentially render assistance was presented in Section 4.0, "Arrangements for Emergency Services". Additional authorities that may be notified include the U.S. Environmental Protection Agency (USEPA) Region VI office, the U.S. Coast Guard Marine Safety Office, and the Texas Department of Public Safety.

6.2 Emergency Response Procedures

6.2.1 Duties of the Emergency Response Coordinator

Whenever there is an imminent or actual emergency situation, the Emergency Response Coordinator (or designee when the Emergency Response Coordinator is on call) that is Command qualified will:

1. Direct, control, and coordinate the activities of the appropriate Emergency Control Center and the Emergency Response Team; and

2. Notify appropriate state or local agencies with designated response roles if their help is needed.

Whenever there is a release, fire, or explosion, the Emergency Response Coordinator will immediately identify the character, exact source, amount, and areal extent of any released materials. The Coordinator may do this by observation, review of facility records, and, if necessary, through chemical analysis. In most cases, the Emergency Response Coordinator will be able to characterize the nature of the spill by knowledge of the event. However,

OxyChem does have on-site analytical capabilities, including volatile and purgeable halocarbon and chlorinated organic compounds, metals by atomic absorption and general parameters such as pH and suspended solids.

Vinyl chloride is the material of most concern in the event of a contingency. It is a cancer suspect agent and personnel who may be exposed to concentrations greater than 1 ppm are required to wear respiratory equipment. Additionally, personnel who may be exposed to liquid vinyl chloride are required to wear protective clothing including boots and gloves. Exposure to very high concentrations of vinyl chloride may cause asphyxiation, irregular heartbeat, unconsciousness, nausea, or dizziness.

Vinyl chloride is a flammable material with a wide explosive range (4-40%). When it burns, it emits carbon monoxide and hydrogen chloride, a toxic and corrosive vapor.

A fixed multipoint chromatograph monitoring system will detect and measure vinyl chloride vapors around the operating units on a continuous basis. Portable hand-held units are available to check any other suspect areas.

Other chlorinated organics are also present in the hazardous wastes. The lighter ones are considered flammable, but all will burn and emit hydrogen chloride vapors.

The Emergency Response Coordinator has access to a list of the chemicals known to be present on the plant site. The list can be generated for the entire site or by work area. A Safety Data Sheet (SDS) for chemicals in the plant can be accessed with the SDS viewer system, which is available twenty-four hours a day on every network computer. Hardcopies of the SDSs are available from the HESS Department if needed. SDSs for each chemical help the Coordinator determine the effects on human health and the environment if there is a contingency that results in a release.

Concurrently, the Emergency Response Coordinator will assess possible hazards to human health or the environment that may result from the release, fire, or explosion. The assessment will consider both direct and indirect results of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface runoff of water or chemical agents used to control fire and heat induced explosion). To assist in this analysis, chemical reference sheets and Safety Data Sheets can be accessed at the Emergency Control Center.

During an emergency, the Emergency Response Coordinator will take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous wastes at the facility. These measures may include, where applicable, stopping processes and operations, and collecting and containing released waste.

If the facility stops operations in response to a fire, explosion, or release, the Emergency Response Coordinator will ensure that plant personnel will monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

6.2.2 First-Line Response

OxyChem has designated trained personnel for fire/explosion response and for response to major spills. In these events, the procedures outlined in the plant's ERP will be implemented. The plant Emergency Response Team (ERT) is trained and equipped for fast response to plant emergencies.

Operations Technicians under the direction of the Shift Supervisor may clean up small spills. For any spill, the employee should immediately notify the appropriate Control Room Technician, who will then notify the Shift Supervisor if implementation of this Contingency Plan is required.

6.2.3 Procedure to Respond to Tank and Container Storage Area Spills and Leaks

Storage tanks (C-720A and C-720B) that are used for storing hazardous waste are equipped with secondary containment systems to prevent the spread of any spilled or leaked material. Secondary containment consists of a concrete pad and dike around the tanks with a sump for collecting spilled material. Spilled material from a storage tank will be transferred to another storage tank and processed through the incinerators according to routine operating procedures; this will be accomplished within 24 hours or in as timely a manner as is possible to prevent harm to human health and the environment. The containment area will be washed down; when appropriate, the contaminated water will be sent to the on-site wastewater treatment plant. The hazardous constituents potentially contained in the contaminated washwater are identical to the contaminants routinely discharged to the wastewater treatment plant; therefore, OxyChem's current TPDES and TCEQ permitted wastewater treatment facility should be able to accommodate occasional containment area washwater. Any liquid that cannot be treated on site (by incineration or wastewater treatment) will be transported to an authorized off-site facility.

Spills from waste containers in the container storage areas will be managed following the same procedures as described for tank spills, i.e., spilled material will be transferred to another container and the containment area will be cleaned to remove any residual contaminants. Spill cleanup waste will be drummed and managed appropriately as hazardous or nonhazardous waste, depending on the waste that spilled.

6.2.4 Incinerator Emergency Shutdown Procedures

The incinerators are equipped with an emergency shutdown system that is designed to keep the units from operating at conditions that could endanger personnel, damage the incinerator equipment, or lead to unacceptable emissions to the atmosphere. The emergency system is designed to shut down the waste feed, the natural gas, and/or the induced draft blowers upon the detection of critical parameters. A complete description of the emergency shutdown system is provided in the "Incinerator Engineering Report" (Attachments V.I.1 and V.I.2).

6.2.5 Post-Response

Immediately after an emergency, the Emergency Response Coordinator will provide for storing, processing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility. For example, contaminated sorbent pads or soils will be drummed and stored at either the Chlor-Alkali, Ethylene, or VCM Container Storage Areas prior to transport to an authorized off-site facility. The Emergency Response Coordinator will ensure that, in the affected area(s) of the facility:

- No waste that may be incompatible with the released material is treated, stored, or disposed of until clean-up procedures are completed; and
- All emergency equipment used for hazardous waste emergency response is cleaned and fit for its intended use before operations are resumed.

To ensure that wastes resulting from a release are properly segregated from other wastes and materials at the plant, the plant's Environmental Department will direct and oversee the management of the spill waste. The waste will either be promptly transported offsite or stored in either the Chlor-Alkali, Ethylene, or VCM Container Storage Areas. Routine operating procedures at the facility will prevent simultaneous storage of any incompatible waste.

The Field Emergency Response Team and Field Incident Commander will be responsible for ensuring that equipment is cleaned and/or replaced, and subsequently notifying the Emergency

Response Coordinator. After ensuring that the equipment is replaced and is ready for use, the Emergency Response Coordinator or his designee will notify the TCEQ Region 14 Office that the facility is in compliance with the above conditions before operations are resumed in the affected area(s) of the facility.

7.0 Reporting Procedures

7.1 Internal Reporting

A plant environmental incident report must be completed and reviewed by designated personnel any time a hazardous waste incident occurs which requires implementation of this Contingency Plan. The format of the form may vary over time; however, the main areas addressed in the form include the date, time, location, and severity of the incident; characteristics and volume of any released material; corrective measures taken; and external notices (such as to outside emergency response authorities) provided.

7.2 External Reporting

Within 15 working days after an incident involving: 1) reportable quantities of material as defined by 30 TAC 327.4, and by 40 CFR Parts 300 and 355; and/or 2) implementation of the Contingency Plan, the Emergency Response Coordinator or designee will submit a written report on the incident to the TCEQ Region 14 Office. The report will include:

1. Name, address, and telephone number of the owner or operator;
2. Name, address, and telephone number of the facility;
3. Date, time, and type of incident (e.g., fire, explosion);
4. Name and quantity of material(s) involved;
5. The extent of injuries, if any;
6. An assessment of actual or potential hazards to human health or the environment, where this is applicable;
7. Estimated quantity and disposition of recovered material that resulted from the incident; and
8. Description of response actions and all information from Section 6.1.2.

8.0 Evacuation Plan

A detailed facility evacuation plan is presented in the plant's ERP or related plan(s) maintained at the plant. The plan, which is not incorporated in this attachment, encompasses alarms, alarm codes, safe area assembly points, and communication methods during the emergency.

Upon the activation of an Area Alarm, all personnel in the affected area shall evacuate to a safe area, which will be dependent on current wind conditions.

The Plant Wide Emergency Alarm means that all plant personnel should report to their designated assembly point, which is dependent on the location of the release and the wind direction. Evacuation instructions/orders are issued by the emergency control center via radio and/or plant wide page. The Assembly point leader has a radio to maintain contact with the emergency control center.

The primary and secondary evacuation routes for plant personnel within the plant that lead to Highway 361 are depicted on the attached map.

9.0 Preparedness and Prevention

9.1 Facility Operation and Design

OxyChem's facility is maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water that could threaten human health or the environment.

The engineering reports for the units that require permitting -- the incinerators, storage tanks, and container storage areas -- present details of design and operating features. A brief discussion of how these design and operating features relate to preparedness and prevention is presented below.

The hazardous waste incinerators are constructed and operated to meet RCRA and industrial standards. Details of the construction materials and monitoring devices are presented in the "Incinerator Engineering Report," (Attachments V.I.1 and V.I.2). The incinerator systems are equipped with flow, pressure, and temperature monitoring equipment to ensure they meet the design operating conditions. The composition of the waste feed is monitored as required by the terms of the facility's HW Permit No. 50322. Additionally, the stack gases are monitored for concentrations of chlorine, carbon monoxide, oxygen, and vinyl chloride monomer.

The hazardous waste storage tanks are designed and constructed according to RCRA and industrial standards and are equipped with high-level alarms and pressure control systems to prevent overfilling or rupture. Details of the construction materials and monitoring devices are presented in the "Tank Report," (Attachments V.C.1 and V.C.2). The tanks have secondary containment to prevent further release of any leakage. Each tank is used for storage of only compatible wastes.

Containers in each of the container storage areas are inspected at least weekly to ensure that containers are secure and that there are no leaks. Details of the construction materials and other applicable information for each of the container storage areas is presented in Attachment V.B. of this application. Proper drum handling equipment, such as dollies and barrel up-righters, are used in the handling of drums to prevent tip-overs and dropping which could damage the drums. The VCM Container Storage Area foundation is sloped toward a containment sump or trench to prevent release of any spilled material, and ignitable wastes

are protected from sources of ignition. The Chlor-Alkali and Ethylene Container Storage Areas are on a concrete pad, providing a barrier in case material is spilled.

9.2 Equipment

9.2.1 Internal Communications and Alarm Systems

The OxyChem plant is equipped with internal communications and alarm systems capable of providing immediate emergency instruction to facility personnel. Whenever hazardous waste is being poured, mixed, or otherwise handled, all personnel involved in the operation have immediate access to an internal alarm or communication device either directly or through visual or voice contact with other personnel. Details about the alarm system were discussed in Section 6.

Because the OxyChem plant is operated 7 days a week, 24 hours/day, there is no instance in which an employee would be onsite alone. Communications over the VAS, PA system, and the alarm system can be heard throughout the entire facility. In addition, portable digital radios are extensively used by personnel in critical areas of the plant.

Routine communications are accomplished by means of standard telephone service. Each control room and office structure in the plant is equipped with several telephones. In all cases when waste is handled at the container storage areas or the incinerators, there is more than one operator available for communication. The hazardous waste tanks are located within an operating unit that is staffed and routinely patrolled by unit operators.

9.2.2 External Communications and Alarm Systems

As previously stated, the OxyChem facility is equipped with telephone service and a public address (PA) system. Each of the unit control rooms has several telephones. In the event of an emergency within the plant, these telephones could be used to summon emergency assistance.

In addition to the telephone system, personnel that are located in critical areas of the plant are equipped with a portable digital radio. The radio can be used to contact the appropriate Control Center Technician. Additionally, some maintenance and construction personnel carry a portable radio for routine communications; the Administration Building and the Operations

Building Coordinators are equipped with portable radios for the purpose of accounting for personnel during an emergency. A list of the radio assignments appears as Table III.E-2.

The radio system at the Ingleside facility is an all-digital radio system that has 15 digital repeaters. These 15 repeaters allow for the system to have 29 simultaneous radio actions or conversations to occur at any one time. Each operating area is in its own zone, with two additional zones for HESS and Outage. The Ingleside radio system has numerous emergency features to ensure that in the event that a repeater or repeaters are lost the system will still allow for some radio communication to take place. The radio system is protected by UPS backup.

Key operational and managerial facility personnel are also equipped with cell phones to be used in emergency situations, including complete facility telephone loss.

Table III.E-2 List of Radio Assignments

ASSIGNED TO	
Cogeneration Control Room	Radio
Chlor-Alkali Control Room	Radio
Ethylene Control Room	Radio
VCM Control Room	Radio
Emergency Operations Center (EOC)	Radio
Aerial Fire Truck	Radio
Pumper Fire Truck	Radio
Rescue Truck (or designated vehicle)	Radio
HazMat Vehicle	Radio
Emergency Response Team (ERT) Leader	Radio
VCM Shift Supervisor (IC)	Radio
Chlor-Alkali Shift Supervisor (IC)	Radio
Ethylene Shift Supervisor (IC)	Radio
Building Assembly Coordinator(s)	Radio

Notes:

(1) Key process, response, and maintenance personnel are issued portable radios.

(2) Radio repeater capabilities:

- Traffic and Distribution Operations
- Chlor-Alkali Operations
- Chlor-Alkali Maintenance
- Ethylene Operations
- Ethylene Maintenance
- VCM Operations
- VCM Maintenance
- ERT Tactical/Safety
- Cogeneration Plant Operations
- Cogeneration Plant Maintenance

9.2.3 Emergency Response Equipment

The OxyChem plant is equipped with fire control/extinguishing, spill control, and decontamination equipment. Fire extinguishers, respirators, and emergency shower and eyewash stations are located strategically throughout the plant; standards of the National Fire Protection Association (NFPA) were followed in establishing the locations of fire extinguishers. A description of the emergency response equipment is presented in Table III.E-3 along with a description of the capability of the equipment.

To provide in-house fire protection and fighting capabilities, the OxyChem plant is equipped with two fire trucks: 3,000-gallon per minute foam pumpers and one with a 100-foot aerial telescoping monitor. The plant also maintains two emergency response vehicles. Table III.E-4 identifies the types of emergency response equipment maintained in the two fire trucks and other emergency response vehicles. Self-contained breathing apparatus are stored and available for the Emergency Response Team on the fire trucks.

9.2.4 Water Supply

9.2.4.1 South End Systems

The South End fire water supply consists of two systems - the potable system and non-potable system. The potable system is supplied as a service by the adjacent Chemours plant (Chemours' water source is San Patricio Municipal Water District (SPMWD)). This system is capable of delivering water at approximately 6,000 gallons per minute (gpm) with a discharge pressure of 150 pounds per square inch. The potable system is tied to the OxyChem Transportation and Distribution domestic water system, which is also supplied by Chemours. The system is activated automatically when a drop in water pressure occurs. Water pressure for the fire water system is maintained by three on-site sequential pumps. The first pump that is activated is an electrical 1,500 gpm pump; the second is a diesel 1,500 gpm pump; the third is a diesel 3,000 gpm pump. The SPMWD maintains a water treatment plant and 6 million gallon reservoir just north of the plant. The SPMWD and reservoir provide an emergency water supply (for use as fire water as well as for consumption) for both the OxyChem (South End) and Chemours facilities. This water can be supplied to the plants through an existing line at approximately 4,000 gpm by electrical pumps. Areas serviced by the potable system include the Chlorine Loading area and Chlorine Recovery area.

The non-potable system includes a 750,000 gallon fire water reservoir. This pond has three diesel fire pumps rated at 2,500 gpm at 150 psig. A 16" fire water line ties this system to the VCM/Middle Area Fire Grid. VCM supplies the makeup water. Areas serviced by the non-potable system include the VCM ship dock area and bulk storage area.

9.2.4.2 The Primary Plant System

The Primary Plant system consists of a fire-water holding pond which is designed and constructed to contain 2.4 million gallons. This pond will provide approximately 10 hours of fire water for process areas and 4 hours for the VCM product storage area. The SPMWD will supply pond make-up water at a rate of 2,300 gpm on level control. In addition, the treated water storage tank (600,000 gallons) was designed for use in firefighting.

A centrifugal, motor-driven pump (rated to provide 2,500 gpm at 150 psig) will be automatically activated in the event the fire-water system pressure falls below 130 psig. Four vertical turbine diesel engine pumps (same ratings as the electrical pump) will satisfy fire water demands that cannot be met by the motor-driven pump, and will furnish water in the event of electrical power loss. The diesel pumps will be sequentially activated automatically in the event that fire-water pressure falls below 120 psig.

9.3 Testing and Maintenance of Equipment

All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment are tested and maintained to assure proper operation in the event of an emergency. Plant wide alarm systems are tested once each week; fire extinguishers and rescue equipment are routinely inspected and serviced.

Details on emergency equipment inspections (items checked and frequency) are presented in Table III.D. of the RCRA Part B application form, "Inspection Schedule".

9.4 Aisle Space

Adequate aisle space is maintained at the container storage areas and tanks to allow unobstructed movement of personnel and emergency equipment. Tanks C-720A and C-720B are readily accessible. At the container storage areas, 1-1/2 feet of aisle space is maintained between each row of drums. In addition, striping of storage areas provides an additional buffer. Pursuant to requirements of the federal Occupational Safety and Health Administration

(OSHA), 29 CFR Sections 1910.106(d)(4)(v) and (d)(5)(vi)(f), at least one clear aisle of at least 3 feet width is also provided in each area.

Further, each container storage area is readily accessible via large door and/or chain link fencing by fire-fighting equipment (e.g., fire trucks, hydrants, hoses, etc.) such that a prompt deluge of water could be deployed in the event of an emergency involving ignitable hazardous waste.

Table III.E-3 Emergency Response Equipment

Equipment	Location	Physical Description	Capabilities
Fire Fighting Equipment			
Fire Extinguishers	Strategically located throughout plant per NFPA	Hand-held 0-20 lb. dry chemical, 10 lb. BC or A/B/C	Extinguish small hydrocarbon or other fires
	Each control room and any building with extensive electrical equipment	Hand-held carbon dioxide, Halon 1211, FE 36 or ABC dry chemical extinguishers	Primarily for small electrical fires, but may be used for any fire
Fire hydrants	Strategically located throughout plant	Hydrants	Support fire defense
Novec 1230 Total Flooding Extinguishing System	Selected areas in C/A Control Room	Fixed, piped system, activated automatically or manually	Discharge in 10 seconds or less, for 10 minutes
Carbon Dioxide Total Flooding Extinguishing System	CoGen Turbine(s)	Fixed, piped system, activated automatically or manually	Discharge in 10 seconds or less, for 10 minutes
Deluge system	Selected process areas	Fixed water spray systems	Effectively respond to the largest single hazard
Two fire trucks with foam pumps	Emergency Response Facility	Full-size fire response vehicles, one pumper equipped with 100-foot aerial telescoping monitor	Provide full firefighting capabilities. Pump 3,000 gpm each. 1,000-gallon foam tank on fire engine; 300-gallon foam tank on ladder truck
Spill Response Equipment			
Spill Response Kits	Emergency Response Facility	Portable drums containing sorbent booms, pillows, and pads	Rapid response to hydrocarbon leaks or spills
Acid/Caustic Spill Response Kits	Emergency Response Facility	Corrosive resistant sorbent booms, pillows, and pads	Rapid response to acid or caustic spills

Equipment	Location	Physical Description	Capabilities
Personal Protective/Safety Equipment			
Emergency shower and eyewash stations	Strategically throughout plant		
Self-contained breathing apparatus	Strategically throughout plant	1-hr SCBA	Provides 45 minutes/ 60 minutes of supplied air for cleanup, rescue, HAZMAT operations
Emergency response vehicle	ERF Bldg.	Rescue/Hazmat Truck	Provides equipment for response to spills, fire, and other emergencies
			Provide team personnel transport
Personal protective equipment	Operator shelters	Hard hats, gloves, glasses, boots, coveralls, face shields, respirators	Provides for general personal protection
Communications Equipment			
Telephones	Each control room	Standard telephone	Provide internal and external communications
Digital radios	Control center/ERT	Portable/base radios	Provides for emergency internal communications
Voice Alarm System (VAS)	Speakers located throughout plant	Selective tones and voice define the type of event/ action to be taken	Provide signal to alert/ activate all or part of plant
Cell Phones	Key emergency personnel	Cellular telephone	Can provide internal and external communications

Table III.E-4 Vehicle Emergency Response Supplies

Vehicle	Item
Chlor-Alkali Shift Supervisor Truck	Not applicable[a]
Chlor-Alkali Brine Truck	Not applicable[a]
Rescue Truck (or designated vehicle)	Rescue Equipment First Aid Supplies HAZMAT Supplies
Aerial Foam-Pumper	High-Volume Water Supply Hose Fire Hoses SCBA Spare air cylinders Misc. Fire Appliances/Adapters
Foam Pumper	Supply Hose Fire Hoses SCBA Spare air cylinders Misc. Fire Appliances/Adapters

[a] Team personnel transport vehicle only

10.0 Provisions for Copies of and Amendments to the Contingency Plan

A complete copy of this Contingency Plan (and the plant's Emergency Response Plan) is located at the Emergency Control Center and on the electronic database. A copy of each plan is also provided to personnel that are responsible for implementing any portion of the plans via the electronic database or by hard copy. The Contingency Plan will be amended whenever:

- Applicable regulations are revised;
- The plan fails in an emergency or drill;
- The facility changes - in its design, construction, operation, maintenance, or other circumstances - in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;
- The list of Emergency Response Coordinators materially changes; or
- The list of emergency equipment materially changes.

The Environmental Department is responsible for amending the plan and distributing revisions.

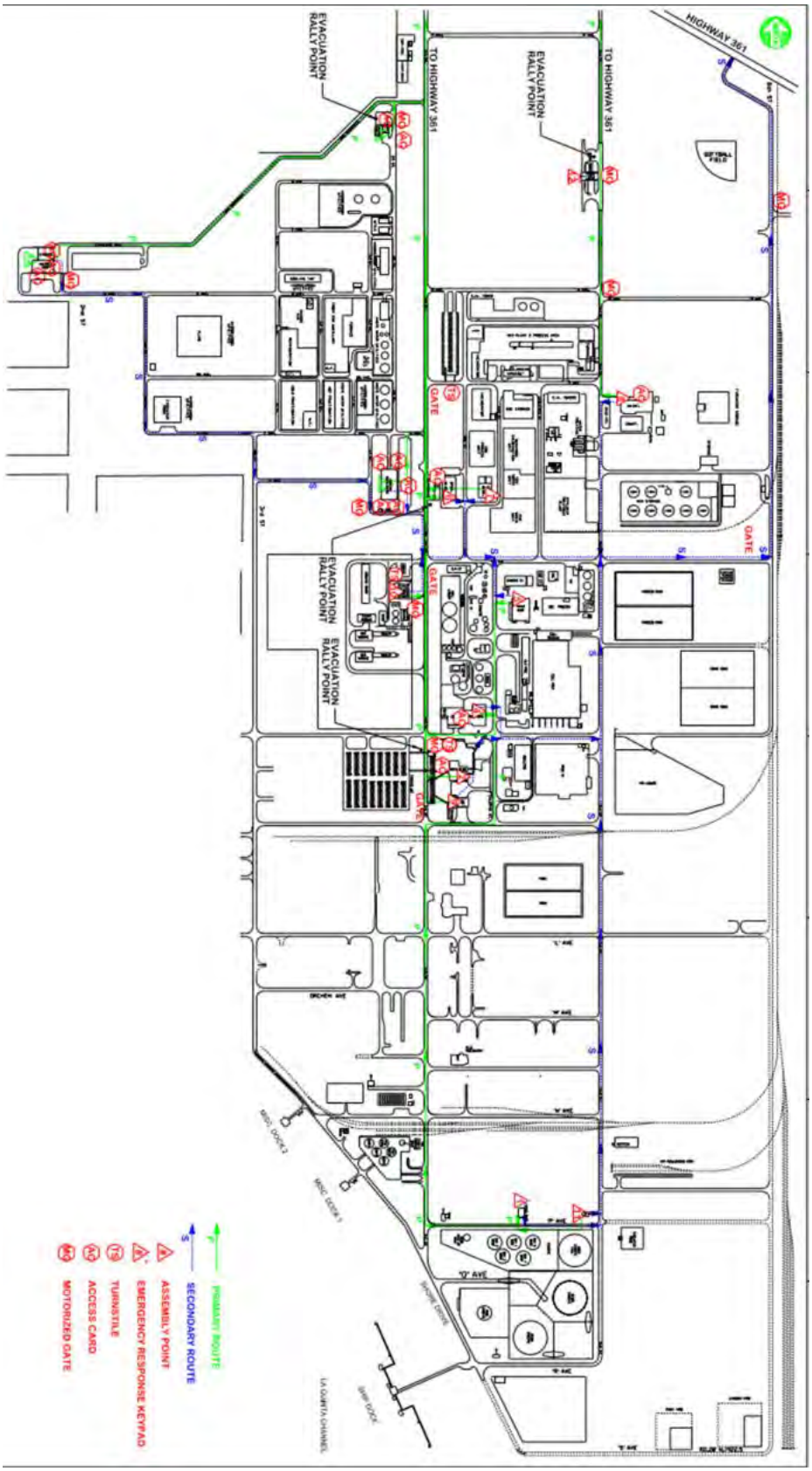
Copies of this Contingency Plan will also be provided to the following authorities:

- Ingleside Fire Department;
- San Patricio County Emergency Management / LEPC;
- San Patricio County Sheriff’s Department;
- USEPA Region VI office (through submittal to the TCEQ); and
- TCEQ.

As amendments to the plan are approved by the TCEQ, the Environmental Department will distribute revised copies to these entities.

Appendix III.E-1

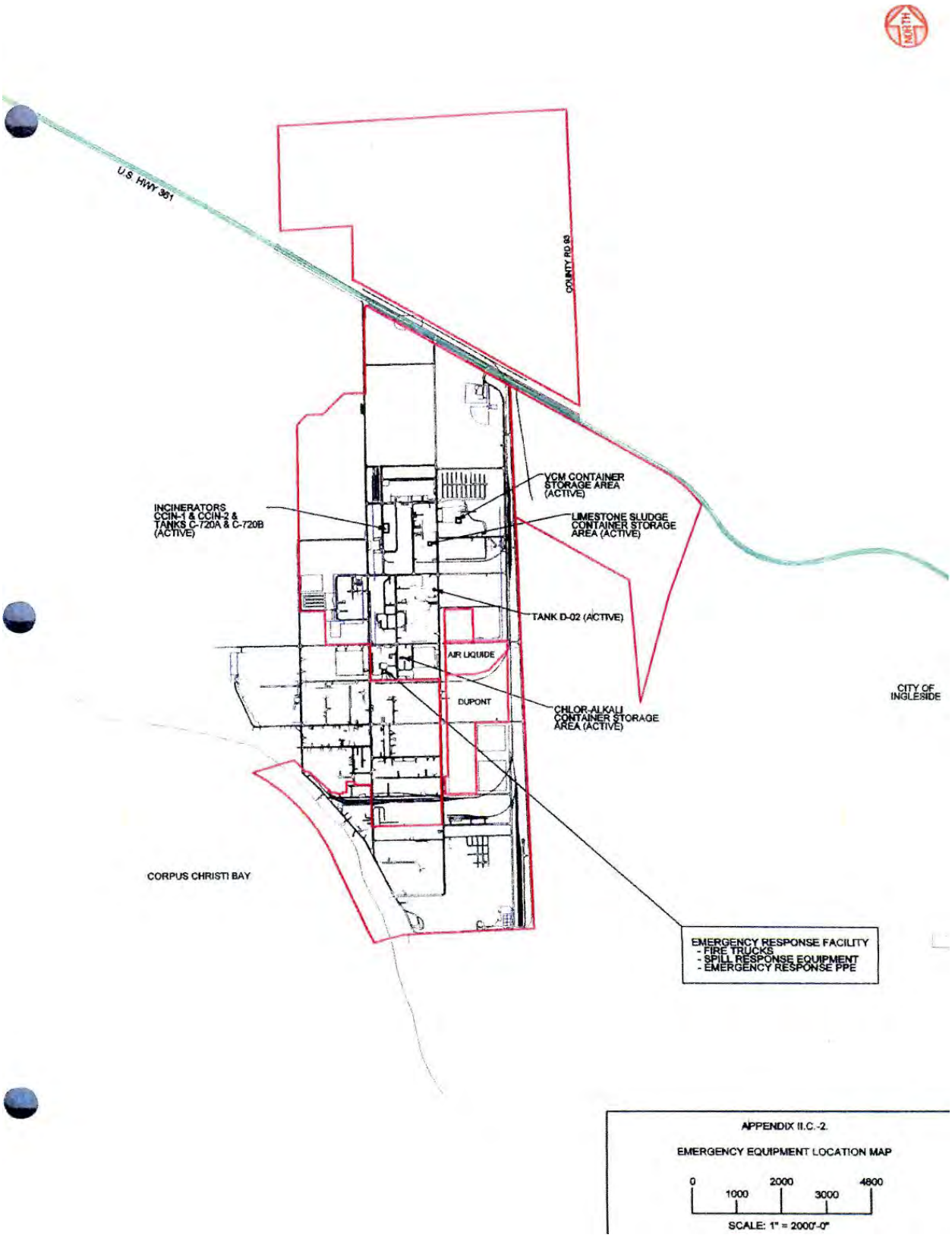
Evacuation Route Map



Appendix III.E-1 Facility Evacuation Routes

Appendix III.E-2

Emergency Equipment Location Map



Appendix III.E-2 Emergency Equipment Location Map

Appendix III.E-3

Correspondence to Local Authorities

Industrial Mutual Aid Group (IMAG) Services Agreement

THIS SERVICES AGREEMENT ("Agreement") is effective as of January 1, 2021, by and between the undersigned Members ("Members"), who will collectively be referred to as the Industrial Mutual Aid Group (IMAG).

RECITALS

A. The Industrial Mutual Aid Group is group of individual Members whose purpose is to respond to Emergencies and provide Assistance in the Greater Portland Area through the mutual efforts of its Members. The Members believe that by pooling their available resources, which shall include various industries which have the resources required to participate in these activities, IMAG can provide a more efficient and effective response for firefighting, rescue, hazmat, air monitoring, and emergency medical manpower during Emergencies. No Member shall receive any compensation for its participation in this plan but may receive reimbursement for its expenses incurred in responding to an Emergency as defined herein.

B. Each Member must reserve manpower, material, and equipment for its own protection before releasing resources under this Agreement for Assistance in an Emergency. This matter is entirely the decision of each Member. No Member, therefore, is obligated by their manpower and equipment listings to provide any specific types of manpower or equipment.

AGREEMENTS

Article 1 Definitions

"Assistance" includes a Member's emergency response personnel, equipment, facilities, services, supplies, aid, and other resources which are requested by the Requesting Member from the Provider(s).

"Emergency(ies)" means an incident or situation – that has occurred, is occurring or will occur in the immediate future – that poses a major threat to public safety or causes or threatens to cause loss of life, serious injury, significant damage to property, or major harm to public health or the environment, as a result of an occurrence or imminent threat of widespread or severe damage or loss of life or property, resulting from a natural, technological, or manmade emergency situation.

"Greater Portland Area" means that area within San Patricio County, Texas that extends to the Bay to the south, to 181 to the north, to Ingleside on the east and to Taft on the west, as further illustrated by the map boundaries attached as Exhibit A.

"IMAG" means Industrial Mutual Aid Group, which is the collective group of Members formed to provide Assistance to one another from time to time.

"Provider" means the Member(s) that furnishes, or is requested to furnish, Assistance under the terms of this Agreement.

"Requesting Member" means the Member that requests or receives Assistance under the terms of this Agreement.

Article 2 Term and Termination

This Agreement is effective for each new Member upon the day and date of its signature. This Agreement shall remain in full force and effect until the Members dissolve it. Any individual Member

may withdraw upon thirty (30) days written notice, which shall be delivered to all Members at the location specified below in the Section 7.5, Notice. Withdrawal does not eliminate any obligation the Member has incurred before the withdrawal date.

Article 3 Emergency Services

3.1 General.

IMAG's objective is the joining together of fire-fighting, rescue, hazmat, air monitoring, and emergency medical manpower among Greater Portland Area industries for Assistance in case of an Emergency. Each Member is responsible for maintaining resources in the form of emergency personnel and equipment in order to respond to Emergencies at their own Member facility.

3.2 Notification.

In the event of an Emergency, if a Member desires support, then the Requesting Member shall promptly notify each Member in IMAG of the Emergency using the IMAG General Operating Procedures and Dispatch Procedures (to be developed as Exhibit C) which will be developed and approved by Members and attached to this Agreement. The notification shall include the location, nature and size of the Emergency and, if known, the type of assistance needed. The initial notification may be oral. The Requesting Member shall retain documentation concerning the request for Assistance.

3.3 Response.

Providers reporting to the Requesting Member's facility or location will park as directed by the Requesting Member's guards or officials and will act directly under the supervision of the officials of that Requesting Member's response coordinator. In all cases where response is made, the Provider(s)' team must wait at the entrance until it receives instructions to enter.

3.4 Participation Voluntary.

There is no obligation on any Member to provide Assistance in an Emergency. Assistance is wholly voluntary based on the needs and availability of a Member to respond. Thus, there is no liability on a Member for either: failing to provide Assistance in an Emergency or for the amount or manner of any response by a Member to an Emergency or for withdrawing Assistance after an initial response.

3.5 Activity Direction.

A Requesting Member must designate a point of contact to meet such aid as it is dispatched, provide a parking location, and provide directions to the Emergency. To receive aid, each Member's emergency plans or supplements to such emergency plans must contain provisions for requesting, receiving and responding to Emergencies as contemplated by this Agreement. The Requesting Member is responsible for directing Assistance. Officials of the Requesting Member may request a Provider provide consultation, advice, or otherwise assist as needed.

3.6 Provider's Response Team.

Each Provider is responsible for compensation of the emergency response personnel it brings to provide Assistance during an Emergency.

Article 4 Reimbursement

4.1 Member Reimbursement.

Each Requesting Member receiving Assistance from Provider(s) shall replace material used, and repair or replace any equipment damaged or lost, in the response to an Emergency within the Requesting Member's facility or on property under the control of the Requesting Member (e.g., leased warehouse space), in kind or in cash at current prices, only if the material and/or equipment was furnished by such Provider(s) in response to a properly placed request under this Agreement.

Any amounts owed under this Section 4.1 shall be paid within 60 days of the Requesting Member's receipt of a valid invoice from the Provider(s). **REIMBURSEMENT OF DAMAGED OR LOST EQUIPMENT IS REQUIRED WITHOUT REGARD TO THE CAUSE OR CAUSES (INCLUDING DAMAGE OR LOSS CAUSED BY PRE-EXISTING CONDITIONS) OR THE NEGLIGENCE OF ANY PARTY OR PARTIES, INCLUDING THE OWNER OR OPERATOR, WHETHER SUCH NEGLIGENCE BE SOLE, JOINT OR CONCURRENT, ACTIVE OR PASSIVE**. Provided, however, the reimbursement provisions of this section 4.1 are inapplicable to the extent that material or equipment is damaged or lost by reason of gross negligence or willful misconduct of the Provider.

4.2 Reimbursement Definition.

Damage to and loss of equipment refers to damage and loss as a result of the Emergency rather than from the wear and tear expected in the normal operation of the equipment. The owner of damaged or lost equipment is entitled to replacement of the equipment if repair of the equipment is not feasible for economic or other reasons. The cost of replacement in that circumstance will be the current cost, in the Greater Portland Area, of new equipment with specifications similar to that of the equipment to be replaced. The current cost of new, similar equipment is to be determined as of the date of the damage or loss that necessitates the replacement of the equipment. In addition, the Requesting Member will reimburse Provider(s) for any costs incurred to lease equipment to replace lost or damaged equipment during the period between such loss or damage and the time that repairs are completed or new equipment is ready for service.

4.3. Survival.

All provisions governing reimbursement obligations under this Agreement shall survive Member withdrawal or the termination of this Agreement.

Article 5 Indemnification

5.1 Member Indemnification

To the fullest extent allowed by law, each Requesting Member shall indemnify, defend and hold harmless each and every Provider and the Provider's agents, directors, officers and employees (the "Indemnified Party or Parties") from and against any and all demands, causes of action, damages, injuries, fines (including penalties or other charges or costs imposed by any federal, state or local authority), liability, attorneys' fees, litigation costs and expenses, and losses of any kind or character for sickness or injury to or death of any person (including, but not limited to, any employee of any Member), and for loss or damage to any property owned or operated by any Member or any other

person or entity (including any equipment and any natural resources) resulting directly or indirectly from the Requesting Member's use of equipment or employees or from the response actions undertaken by Provider(s). This indemnification is applicable to all events occurring on the actual property of the Requesting Member or on property under the control of the Requesting Member. Demands, causes of action, damages, injuries, fines, liability, losses of any kind or character for sickness or death of any person (including any employee), and for loss or damage to any property occurring off of the actual property of the Requesting Member or off of property under the control of the Requesting Member will be governed by common law. In the event any claim or demand is made or suit or action is filed against a Provider alleging liability for which a Requesting Member is obligated to indemnify such Provider pursuant to this Agreement, the Requesting Member shall promptly notify the Provider of such claim and, providing that the Requesting Member shall first acknowledge its responsibility to indemnify for such claim in writing, the Requesting Member shall be entitled to assume the defense at its sole cost and expense, provided that the Provider requesting indemnification may participate with counsel of its choosing at its own expense. The Requesting Member shall keep the Provider fully informed of all developments and shall not, without the prior written consent of the Provider, consent to the entry of any judgment or agree to any settlement, unless such judgment or settlement (i) grants Provider an effective release from all liability, and (ii) does not materially impair the operations of the Provider or its use of any material asset.

5.2 Gross Negligence, Willful Misconduct, and Criminal Law.

EACH MEMBER AGREES THAT THE INDEMNITIES PROVIDED FOR IN THIS AGREEMENT SHALL BE EFFECTIVE REGARDLESS OF THE NEGLIGENT ACT OR OMISSIONS OF THE INDEMNIFIED PARTIES WHETHER SUCH NEGLIGENCE BE SOLE, JOINT OR CONCURRENT, ACTIVE OR PASSIVE, AND REGARDLESS OF WHETHER LIABILITY WITHOUT FAULT IS IMPOSED ON THE INDEMNIFIED PARTIES, EXCEPT TO THE EXTENT THAT THE LIABILITY ARISES BY REASON OF THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF THE INDEMNIFIED PARTIES. IN ADDITION, NO MEMBER SHALL BE LIABLE TO ANY INDEMNIFIED PARTY FOR ANY CLAIMS OR PENALTIES ARISING OUT OF OR RESULTING FROM THE INTENTIONAL VIOLATION OF ANY CRIMINAL LAW.

5.3 Insurance.

Each Member also covenants and agrees that the indemnity and hold harmless provisions are not limited, restricted, or in any way affected by the amount of insurance carried by the Requesting Member.

5.4 Survival.

All indemnities made by a Member under this Agreement shall survive Member withdrawal or the termination of this Agreement.

5.5 Financial Requirements for Members.

Each Member hereby warrants it is capable of meeting the financial obligations associated with the indemnification referenced in this section by having in place and keeping in place at all times during the Member's participation in IMAG one of the following:

a) Liability insurance coverage (in any combination of primary or umbrella or excess liability policy) with a third-party insurer in an amount not less than $10,000,000 (ten million dollars/U.S.) per occurrence; or

b) Net worth in an amount not less than $20,000,000 (twenty million dollars/U.S.).

5.6 Financial Requirement Notification.

If any of the financial requirements described in Section 5.5 are canceled or changed in any way so as not to satisfy the financial requirements of Section 5.5, then notice will be given in writing by the Member within thirty days in advance of the cancellation or change.

Article 6 Compliance with Laws and Regulations

All Members shall comply with all laws, regulations, decrees, codes, ordinances, resolutions and other acts of any governmental authority, including without limitation, all federal, state or local laws and regulations, particularly as they affect the safety and welfare of Members' employees.

Article 7 Miscellaneous

7.1 Representatives of the Member.

The Representatives(s) of the Member, appointed from time to time, shall represent the Member in its communications and transactions under this Agreement. The Members shall be entitled to rely upon the power and authority of each Representative(s) to represent and bind the Member in all matters pertaining to this Agreement. The Representatives name and contact information will be kept current on attached Exhibit B, Member Contact Representatives.

7.2 Amendments.

This Agreement may not be amended, modified, supplemented or otherwise altered except pursuant to an approval of all participating Members.

7.3 Governing Law.

This Agreement shall be governed by, and construed in accordance with, the laws of the State of Texas.

7.4 Severability.
If any provision of this Agreement or portion thereof should be declared invalid for any reason, the invalid provisions or portion thereof shall be deemed omitted and the remaining terms shall nevertheless be carried into effect.

7.5 Notice

All notices to a Member, except for payments and as otherwise directed herein, shall be in writing and may be sent by email in addition to delivery by recognized commercial courier or registered or certified mail to the following address of the party for whom intended, or to such other address as a party may hereafter substitute by notice to the others, and shall be effective as of the date of receipt.

Industrial Mutual Aid Group (IMAG) Services Agreement

Gulf Coast Growth Ventures:

4589 FM 2986

Gregory, TX 78359

Telephone:

Email:

Attention: GCGV Plant Manager

Vopak:

Address:

Gregory, TX 78359

Telephone:

Email:

Attention:

Voestalpine:

Address: 2800 Kay Bailey Hutchinson Rd

Portland, TX 78374

Telephone:

Email:

Attention:

Oxy:

Address: 4133 TX-361

Gregory, TX 78359

Telephone:

Email:

Attention:

Chemours:

Address: 1444 TX-361

Ingleside, TX 78362

Telephone:

Email:

Attention:

Moda Midstream:

Address:

Gregory, TX 78359

Telephone:

Email:

Attention:

7.6 Waiver.
The waiver of a breach of any term or condition of this Agreement shall not be deemed to constitute the waiver of any other breach of the same or any other term or condition.

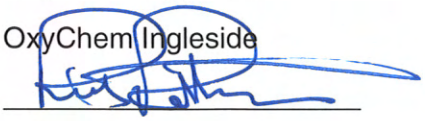
7.7 Entire Agreement.
This Agreement, together with the documents referenced herein, contains the entire understanding between the parties and supersedes any prior written or oral agreements between them respecting the subject matter contained herein.

7.8 Assignment; Binding Effect.
A Member may not assign its rights and obligations under this Agreement; provided that no such consent shall be required for any assignment to an affiliate of such Member or in connection with the sale of all or substantially all of such Member's business or assets at the locations covered by this Agreement. Subject to and without affecting the prohibitions herein with respect to assignment, this Agreement shall be binding on the parties and their respective successors and assigns.

7.9 Counterparts.
This Agreement will be executed in any number of counterparts, each of which when so executed shall be deemed to be an original, and such counterparts together shall constitute and be one and the same instrument.

Industrial Mutual Aid Group (IMAG) Services Agreement

IN WITNESS WHEREOFF, the parties have executed this Agreement as of the date executed.

Member:	OxyChem Ingleside
Organization:	OxyChem Ingleside
Signature:	
Printed Name:	Rick R. Ritter
Title:	Plant Manager
Date:	06-02-2021

Attachment IV.

Wastes and Waste Analysis

Attachment IV.B

Wastes Managed in Permitted Units

Attachment IV.C

Sampling and Analytical Methods

Table IV.C. – Sampling and Analytical Methods

Waste No.[1]	Sampling Location	Sampling Method[2]	Frequency	Parameter	Test Method[2]	Desired Accuracy Level[3]
1	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods
2	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods
3	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods
4	Sample taps at waste feed loops and/or feed lines	Grab	Annual[4]	Ash Hg As, Be, Cd, Cr, Pb Cl_2/Cl	ASTM D482 EPA 7470 EPA 6010/6020 EPA 9056	0.02 Wt% 5 mg/Kg 5 mg/Kg 15,000 mg/Kg
5	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods
6	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods
7	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods
8	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods
9	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods

Waste No.[1]	Sampling Location	Sampling Method[2]	Frequency	Parameter	Test Method[2]	Desired Accuracy Level[3]
10	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods
11	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods
12	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods
13	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods
14	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods
15	Sample taps at waste feed loops and/or feed lines	Grab	Annual[4]	Ash Hg As, Be, Cd, Cr, Pb Cl_2/Cl	ASTM D482 EPA 7470 EPA 6010/6020 EPA 9056	0.02 Wt% 5 mg/Kg 5 mg/Kg 15,000 mg/Kg
16	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods
17	Sample taps at waste feed loops and/or feed lines	Grab	Annual[4]	Ash Hg As, Be, Cd, Cr, Pb Cl_2/Cl	ASTM D482 EPA 7470 EPA 6010/6020 EPA 9056	0.02 Wt% 5 mg/Kg 5 mg/Kg 15,000 mg/Kg
18	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods

Waste No.[1]	Sampling Location	Sampling Method[2]	Frequency	Parameter	Test Method[2]	Desired Accuracy Level[3]
19	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods
20	Sample taps at waste feed loops and/or feed lines	Grab	Annual[4]	Ash Hg As, Be, Cd, Cr, Pb Cl_2/Cl	ASTM D482 EPA 7470 EPA 6010/6020 EPA 9056	0.02 Wt% 5 mg/Kg 5 mg/Kg 15,000 mg/Kg
21	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods
22	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods
23	Sample taps at waste feed loops and/or feed lines	Grab	Annual[4]	Ash Hg As, Be, Cd, Cr, Pb Cl_2/Cl	ASTM D482 EPA 7470 EPA 6010/6020 EPA 9056	0.02 Wt% 5 mg/Kg 5 mg/Kg 15,000 mg/Kg
24	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods
25	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods
26	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods
27	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods

Waste No.[1]	Sampling Location	Sampling Method[2]	Frequency	Parameter	Test Method[2]	Desired Accuracy Level[3]
28	Container	Grab	As needed[5]	Those required for waste characterization	Various	As per analytical methods

[1] From Table IV.B, first column

[2] 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.

[3] 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.

Attachment IV.D

Waste Analysis Plan

Attachment IV.D

Waste Analysis Plan

OxyChem
Ingleside, Texas

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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.

The plan has been developed to comply with federal RCRA regulations contained in 40 CFR 264.13 and 264.341 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 induced draft organic chloride incinerators, CCIN-1 and CCIN-2. These 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.

Effective September 11, 2003, these incinerators became subject to the Hazardous Waste Combustor MACT regulations of 40 CFR Part 63, Subpart EEE. A Feedstream Analysis Plan (FAP) is required under the HWC MACT regulations. Analysis of the hazardous wastes treated in the incinerators is described in the FAP. 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 plans for analyzing these wastes.

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 CCIN-1 and CCIN-2 incinerators or shipped off-site for disposal or treatment. These wastes are identified in Table 3-1.

Table 3-1 Hazardous Waste List

Waste Description	EPA Waste Code(s)	TCEQ Waste Code(s)
Oil and/or Solvent Contaminated Solids	D028, D040, D043, F001, F003, K019, K020, U043, U077	0106489H 0108407H 0241301H 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 0140209H 0196409H
Fuel Oil Contaminated Water	D001, D018	0177205H
Spent Carbon Canisters and Can Residue	D001, D035, D040, F003	0190404H 0192204H 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 0243319H
VCM Furnace Coke	D001, D006, D007, D028, D043	0244407H
Spent Catalyst	D028, F001, F003, F005, F025, K019, K020	0246393H 0298393H
VCM Trench Material	D028, D043, K019, K020, U077	0247319H

Table 3-1 Hazardous Waste List (continued)

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

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 for Wastes Designated for Off-Site Disposal

All of the wastes identified in Table 3-1 are candidates for off-site disposal at an authorized TSDF, although five may be incinerated on site (EDC heavy ends, VCM heavy and light ends, mother liquor, and waste oil). Analyses of the wastes to be shipped off-site 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 (TCLP, 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.

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/ Density	Weight compared to water	D1429 / D1429	ASTM
Ash	Gravimetric	D482	ASTM
Viscosity	Saybolt or Cannon Fenske Viscosimeter	D445	ASTM
Heating Value	Bomb Calorimeter	D240	ASTM
Total Organic Halides	Oxidative	9076	SW-846
	Combustion		
	Coulometric		
	Titration		
Organics: Volatiles Semivolatiles	 GC/MS GC/MS	 8260 8270	 SW-846 SW-846
Metals: Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, 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.

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.

6.0 Precautions to Avoid Hazards

A major objective of the waste analysis plan is to alert OxyChem of potential hazards associated with the handling and disposal of wastes. Of major concern is reactions of inadvertently mixed wastes which produce toxic gases or fumes, extreme heat, non-toxic gases in the case of sealed containers, fire, or explosion.

A few of the routinely produced wastes at OxyChem are ignitable due to their solvent content. OxyChem always assumes that the ignitability hazard is present. All containers containing potentially ignitable wastes are prominently identified as flammable with the appropriate USDOT labels. Operators are aware of the potential ignitability hazard and are trained accordingly. Additionally, the container storage areas and hazardous waste feed tanks are located in non-smoking areas of the facility. No hot activity (such as welding) can take place without a plant permit, so this process would ensure that no hot work would be done in the presence of ignitable wastes.

In addition, the location of the feed tanks complies with siting restrictions of national codes. The hazardous waste tanks C-720A and C-720B are located approximately 2,500 feet from OxyChem's northern property boundary, 2,500 feet from the closest public road (Highway 361 on the northern boundary of the plant), and approximately 4,500 feet from La Quinta Channel (along OxyChem's southern property boundary). Section 2-3.1 of the National Fire Protection Association's (NFPA) Flammable and Combustible Liquid Code (NFPA 30, 1990) specifies maximum allowable distances from above-ground flammable or combustible liquid storage tanks to public ways, streets, alleys, and the facility's property line. Section 2-3.1.3 (Table 2-2), in particular, is applicable to OxyChem's two hazardous waste feed tanks. The most stringent distance requirements of Table 2-2 provides a minimum distance of not less than 50 feet from any tank to the facility's property line that is or can be built upon, including the opposite side of a public way, and not less than 25 feet from the closest side of any public way. Based on the distances mentioned above, the two hazardous waste feed tanks are located well beyond the NFPA distance requirements for public ways and the facility's property line.

The VCM waste streams may contain vinyl chloride, a known carcinogen. Personnel exposed to concentrations greater than 1 ppm are required to wear respiratory equipment. Additionally, personnel are required to wear protective clothing including boots and gloves. Vinyl chloride is a flammable material with a wide explosive range (4-40%). When it burns, it emits carbon monoxide and hydrogen chloride, a toxic and corrosive vapor.

Other chlorinated organics may also be present in OxyChem's hazardous waste streams. The lighter ones are considered flammable but all will burn and emit hydrogen chloride vapors.

If any question arises concerning the composition of a waste, the plant Environmental Group must be consulted.

7.0 Recordkeeping Requirements

Waste analysis data described by this plan will be kept on-site for a minimum of three years as per 40 CFR 262.40 and 40 CFR 268.7.

Attachment V.

Engineering Reports

Table V.A. – Facility Waste Management Handling Units

TCEQ Permit Unit No.[1]	Unit Name	NOR No.[1]	Unit Description[3]	Capacity	Unit Status[2]
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		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		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

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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 HCl production furnaces (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.

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.

2.4 Regional Aquifer

Pursuant to 30 TAC 335.204(a)(4), storage or processing facilities may not be located in areas overlying regional aquifers unless there is a minimum of ten feet of material with a hydraulic conductivity toward the aquifer not greater than 10^{-7} centimeters per second (cm/sec) or secondary containment is provided to preclude migration to groundwater from spills, leaks, or discharges. Figure 5 shows the major aquifers of Texas and indicates that the OxyChem facility may be situated over the Gulf Coast Aquifer, which is classified as a regional aquifer. Information on the secondary containment structures for the facility 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.

2.5 Soil Series

Pursuant to 30 TAC 335.204(a)(5), storage or processing facilities may not be located in areas where soil unit(s) within five feet of the containment structure have a Unified Soil Classification of GW, GP, GM, GC, SW, SP, or SM, or a hydraulic conductivity greater than 10^{-5} cm/sec unless secondary containment is provided to preclude migration to groundwater or surface water from spills, leaks or discharges. Appendix B presents a soil report for the OxyChem facility. None of the listed Unified Soil Classification types are present at the facility. In addition, information on the secondary containment structures for the facility 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.

2.6 Public Water Supply Lake

Pursuant to 335.204(a)(6), storage or processing facilities may not be located 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, unless the design, construction, and operational features of the facility will prevent adverse effects resulting from a release in such areas. As indicated on the USGS Map (Figure 1), there are no lakes within one mile of the OxyChem facility. As such, the facility is not located in an area of direct drainage within one mile of a public drinking water supply lake.

2.7 Active Geologic Processes

Pursuant to 335.204(a)(7), storage or processing facilities may not be located in areas of active geologic processes unless the design, construction, and operational features of the facility prevent adverse effects resulting from the geologic processes.

The facility is not situated within an area of faulting (see Section 2.8), karst formations, and/or meandering river bank cuttings. Further, it is not situated in the 100-year floodplain (see Section 6.0), therefore, the facility is not in a flood wash zone or an area of significant erosion associated with stormwater drainage features. The OxyChem facility is not located in one of the political jurisdictions listed in 40 CFR Part 264, Appendix VI with seismic considerations. As such, no further information is submitted to demonstrate compliance with 40 CFR 264.18(a).

Some degree of subsidence may be present at the facility due to historical groundwater pumping in the area. However, the general trend of subsidence related to groundwater pumping has attenuated over recent years. No effects due to subsidence (e.g., cracking) have been observed at existing units. Also, unit foundations were constructed of reinforced concrete to provide sufficient structural support.

2.8 Faults

30 TAC 335.204(a)(9) indicates that storage or processing facilities may not be located within 30 feet of the upthrown side or 50 feet of the downthrown side of the actual or inferred surface expression of a fault. Figures 6 and 7 present maps showing the location of faults in Texas and in proximity to the OxyChem facility, respectively. As shown in these figures, there are no faults in the vicinity of the OxyChem facility.

3.0 Preparedness and Prevention

Preparedness and prevention measures associated with hazardous waste management at the facility are part of the overall safety program at the facility. These include a number of measures specifically focused on preparing for and preventing a release of hazardous waste and conditions that may arise as a result of a release.

Preparedness for releases of hazardous waste is within the context of overall emergency response activities. The Contingency Plan in Attachment III.E. of this application describes procedures that have been implemented to respond to emergency situations involving hazardous waste. The following sections describe procedures and actions that the facility has implemented to minimize the potential for emergency situations involving hazardous waste.

3.1 Personnel Training

One of the primary tools for preventing releases of hazardous waste at the facility is effective personnel training. The Training Plan in Attachment III.B of this application describes the training program for hazardous waste workers as well as an awareness program for other personnel at the facility. Facility personnel will be trained according to job duties, with those personnel having duties relating to daily management of hazardous waste having the highest level of classroom and on-the-job training.

3.2 Inspections

Another primary tool for preventing releases of hazardous waste is through routine inspections. As required, OxyChem inspects all hazardous waste management units and associated equipment. These inspections are used to identify and correct problems before they lead to conditions that could result in releases of hazardous waste. Information regarding inspections is provided in the Inspection Schedule in Attachment III.D of this application. Information on inspections 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.

3.3 Loading/Unloading Operations

Information regarding hazard prevention for loading/unloading operations 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. In general, container storage areas are provided with ramps to

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 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 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 ignitibility (D001). In addition to the procedures specified in the prior sections, the following are used to prevent ignition of ignitable waste streams:

- Waste streams are hard piped from loading/unloading operations to the storage tanks and then generally hard piped from the storage tanks for subsequent management;

- Structures, piping, and other equipment for hazardous waste management units are connected to a grounding grid; and

- No smoking is allowed in the area of hazardous waste management units.

3.10 Design and Facility Operation

The facility is designed and operated as reflected in the above sections to minimize the possibility of a fire, explosion, and/or release of hazardous waste.

3.11 Required Equipment

The Contingency Plan in Attachment III.E of this application describes the emergency response and preparedness and prevention equipment at the facility. This equipment includes the following:

- Communication and alarm systems;
- Fire control, spill control, and decontamination equipment; and
- Water volume and pressure to support firefighting activities (e.g., fire hoses, sprinkler systems, etc.).

3.12 Testing and Maintenance of Equipment

The Inspection Schedule in Attachment III.D of this application includes testing and maintenance procedures for the above-required Contingency Plan equipment. Inspection information 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.

3.13 Access to Communications and Alarm Equipment

Facility personnel are equipped with portable communication devices (e.g., two-way radios) to facilitate communications at all times. Portable communication devices are linked to a common communication platform (e.g., radio channel), so that information is communicated instantly to all available operations personnel. As such, personnel involved in the management

of hazardous waste have instant access to communications equipment and, via the communication platform, have the ability to initiate sounding of the facility alarm.

The facility is not operated under conditions that would result in only one employee being present at the facility. Nonetheless, operations personnel are equipped with two-way communications devices meeting the criteria of 264.34(b) for summoning emergency response personnel.

3.14 Aisle Space

As reflected on Figure 1 (Facility Plot Plan), hazardous waste management units are situated in areas that are relatively free of obstructions or access barriers. As such, emergency response personnel and equipment can be summoned and deployed at the units in the event of an emergency situation. In addition, adequate aisle space (e.g., a minimum of 18 inches between rows and walls where containers are located) is provided to allow for movement of personnel and equipment within container storage areas.

4.0 Traffic

Roads in the facility are two-way. Most roadways in and adjacent to operating units are constructed of asphalt and/or reinforced concrete. This also applies to the main entry road. Roads associated with and immediately surrounding hazardous waste management units are capable of providing all weather use for even the heaviest piece of equipment at the facility. Figures 1 and 3 reflect the layout of the facility road system.

Vehicle entry into the facility is controlled by security personnel situated at the security guard station located at the entry gate. Vehicles can consist of pick-up trucks, cars, maintenance equipment, transport trucks, etc. Contract service vehicles (e.g., vacuum trucks, backhoes, etc.) used during handling of hazardous waste materials are inspected for cleanliness upon entry to the facility. OxyChem personnel check vehicles for leaks when exiting the facility.

The facility also has signs on the perimeter fence in English that state “Danger - Unauthorized Personnel Keep Out” or similar language.

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.

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

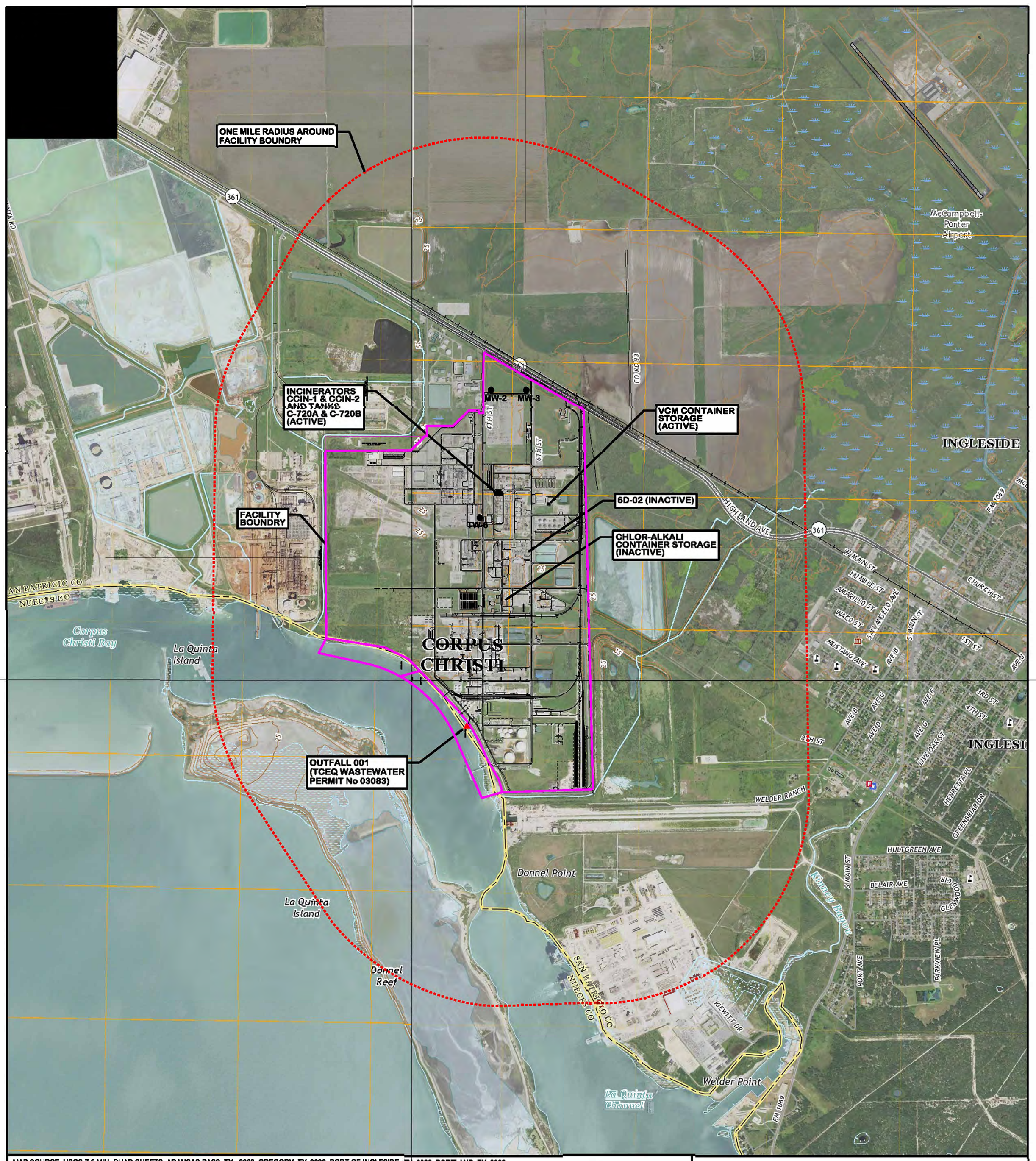
- Contingent waste removal procedures if flood protection is not provided.

7.0 Construction Schedules

All hazardous waste management units at the OxyChem facility are in existence and no new construction is being proposed with this application. In addition, no compliance schedules are needed for this permit renewal. Therefore, no construction or compliance schedules are included in this section.

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



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

NORTH

0 2000

SCALE IN FEET

FACILITY BOUNDARY

ONE MILE RADIUS

OUTFALL LOCATION

MW-2 MONITORING WELL LOCATION AND IDENTIFICATION NUMBER

QUADRANGLE LOCATION

OXYCHEM

DATE: 06/17/2025

FILE: ATT-C-USGSMAP.DGN

FIGURE 1
USGS MAP

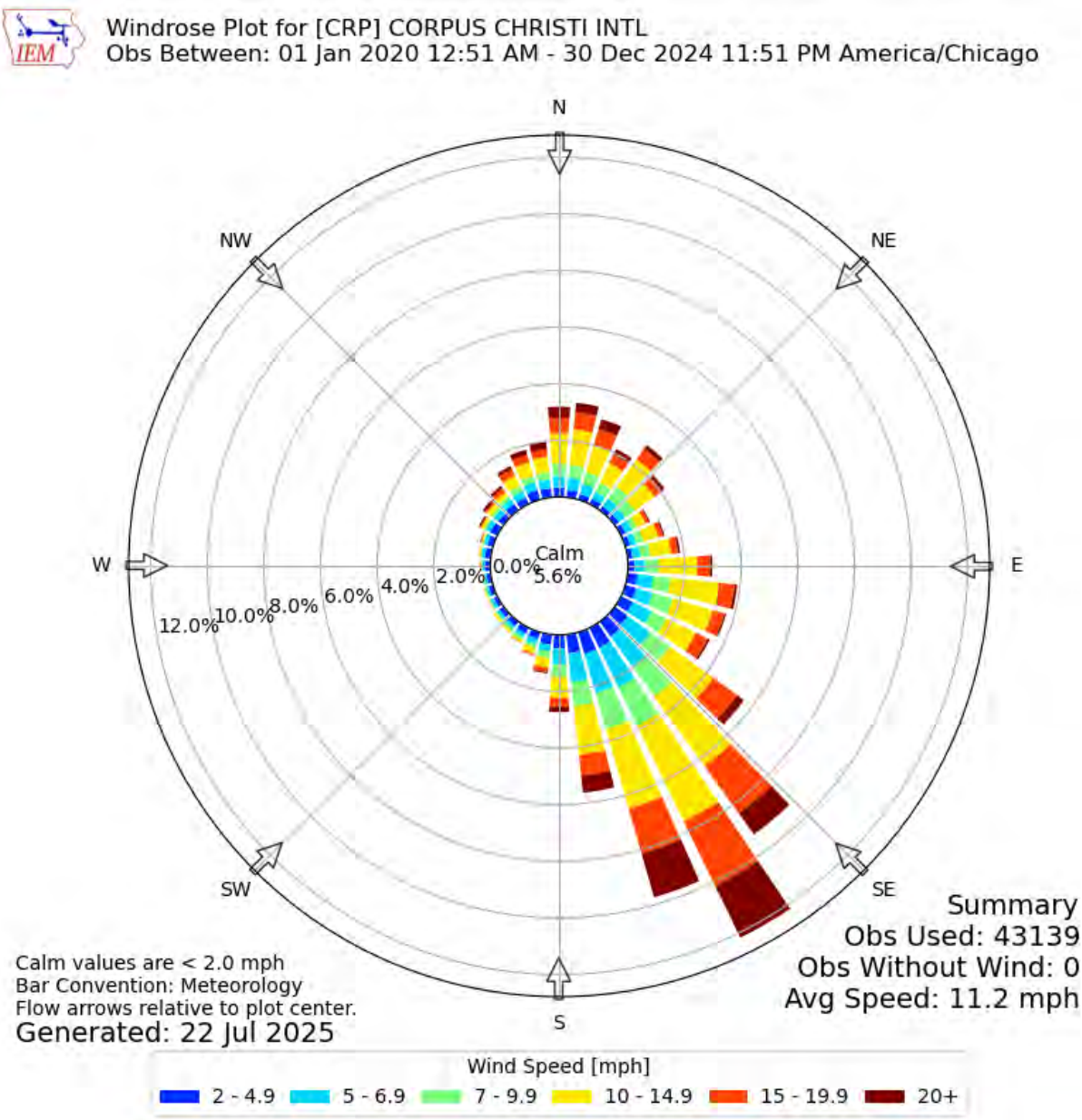
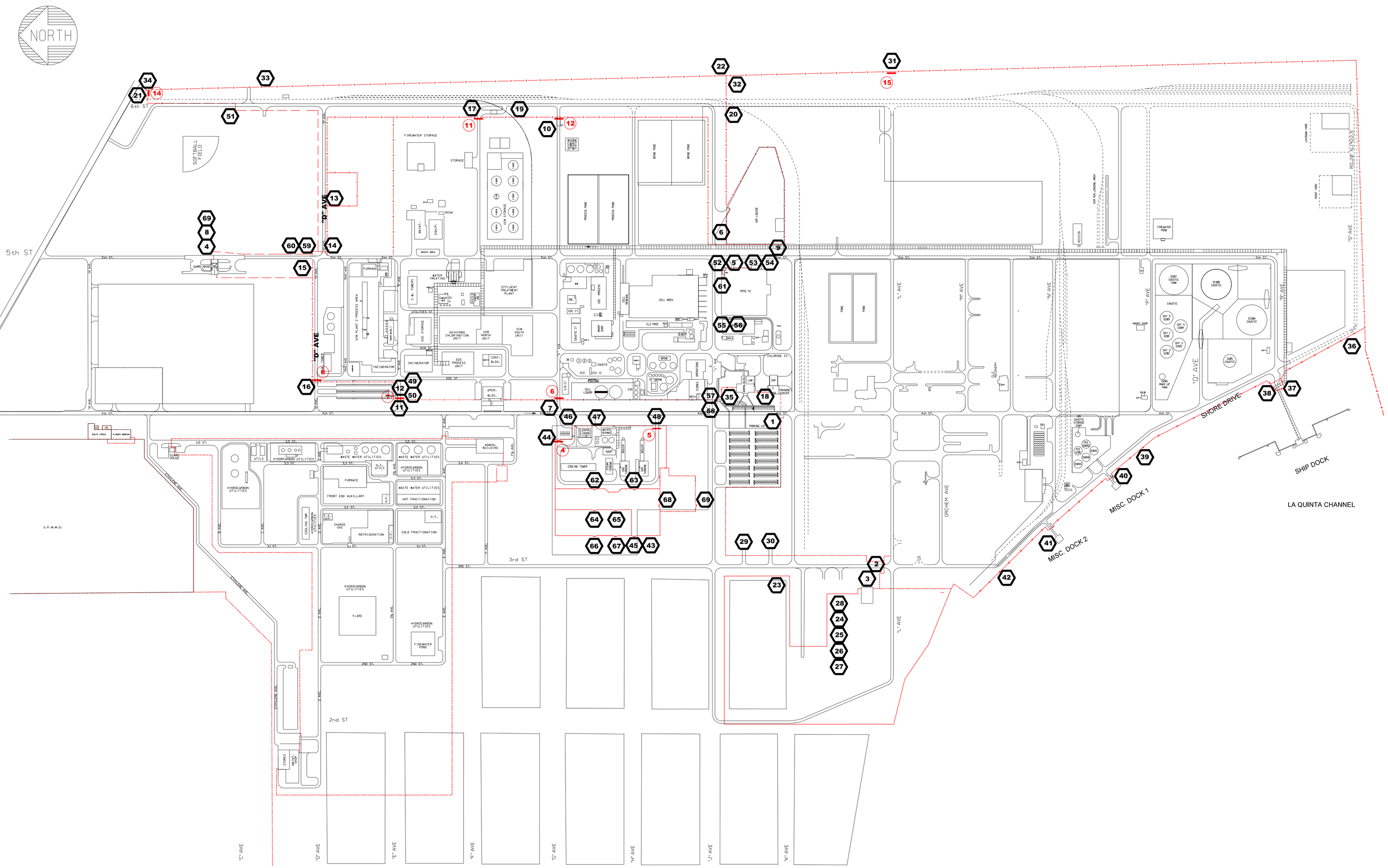


Figure 2 – Corpus Christi International Airport Wind Rose – 2020 through 2024

GATE LOCATION LEGEND: (#)

1. DUPONT MAIN GATE	N/A
2. DUPONT/BROWN & ROOT CONSTRUCTION GATE	N/A
3. DUPONT/BROWN & ROOT CONSTRUCTION GATE	N/A
4. OXYCHEM INGLESIDE MAIN GATE	N/A
5. CPL PURCHASE POWER 2 GATE	N/A
6. AIR LIQUIDE GATE ON "J" AVE. & 5TH ST.	BREAK AWAY
7. OXYCHEM GATE A "G" AVE. & 4 TH ST.	BREAK AWAY
8. PERSONNEL GATE @ MAIN GATE TURNSTILE	BREAK AWAY
9. AIR LIQUIDE - PEDESTRIAN GATE - 5TH ST.	MASTER
10. "G" AVE. & 6 TH ST.	BREAK AWAY
11. "E" AVE. & 4 TH ST.	MASTER
12. VCM TURNSTILE	N/A
13. PERSONNEL GATE @ "D" AVE., PERIMETER GATE	MASTER
14. VCM PLANT 2 MOTORIZED GATE @ "D" AVE. & 5TH ST.	MASTER
15. VCM PLANT 2 GATE NORTH "D" AVE. & 5TH ST.	MASTER
16. VCM PLANT 2 GATE AT "D" AVE & EDC ST.	BREAK AWAY
17. "F" AVE. & 6 TH ST. PERIMETER GATE	BREAK AWAY
18. ADMIN. BUILDING - PEDESTRIAN GATE - 4TH ST.	MASTER
19. VCM RAIL SPUR GATE OFF 6TH ST.	MASTER
20. DUPONT RAILROAD SPUR GATE (OPEN)	MASTER
21. OXYCHEM INGLESIDE RAILROAD SPUR GATE	MASTER
22. OCCIDENTAL PERIMETER ROAD MAINTENANCE GATE	MASTER
23. BROWN & ROOT STORAGE YARD	N/A
24. BROWN & ROOT BRASS SHACK (NOT IN USE)	N/A
25. BROWN & ROOT BRASS SHACK (NOT IN USE)	N/A
26. BROWN & ROOT BRASS SHACK (NOT IN USE)	N/A
27. BROWN & ROOT BRASS SHACK (NOT IN USE)	N/A
28. BROWN & ROOT LAYDOWN YARD	N/A
29. CP&L SUBSTATION (NORTH GATE)	N/A
30. CP&L SUBSTATION (SOUTH GATE)	N/A
31. DUPONT GATE "L" AVE. & CALICHE (EAST OF 6TH ST.)	N/A
32. GATE 6TH ST. & AVE. "J"	MASTER
33. GATE 6TH ST. NORTH OF SCALE HOUSE	MASTER
34. POLE GATE HWY. 361 ACCESS - EAST OF RR TRACK	MASTER
35. C/A TURNSTILE	N/A
36. SHORE DRIVE PERIMETER GATE	MASTER
37. PERSONNEL GATE - SHIP DOCK	MASTER
38. SHIP DOCK ACCESS GATE	MASTER
39. BOAT RAMP GATE	MASTER
40. MISCELLANEOUS DOCK GATE	MASTER
41. HCL DOCK GATE	MASTER
42. SHORE DRIVE PERIMETER GATE	MASTER
43. COGEN LAYDOWN ACCESS GATE	MASTER
44. COGEN ACCESS GATE	MASTER
45. COGEN MAN GATE	MASTER
46. COGEN TURNSTILE	N/A
47. COGEN MOTORIZED ACCESS GATE	MASTER
48. COGEN ACCESS GATE	MASTER
49. MAN GATE @ VCM TURNSTILE	BREAKAWAY
50. VCM PARKING LOT ACCESS GATE	MASTER
51. AIR LIQUDE MOTORIZED ACCESS GATE	MASTER
52. PPSS #2 MAN GATE - OPEN	MASTER
53. PPSS #2 MAN GATE	MASTER
54. PPSS #2 ACCESS GATE	MASTER
55. PPSS #2 MAN GATE	MASTER
56. PPSS #2 ACCESS GATE	MASTER
57. C/A MOTORIZED GATE	MASTER
58. C/A PERSONNEL GATE	BREAKAWAY
59. CONTRACTOR SHUTDOWN TURNSTILE	N/A
60. CONTRACTOR SHUTDOWN MAN GATE	BREAKAWAY
61. PPSS #2 MAN GATE	MASTER
62. COGEN LAYDOWN ACCESS GATE	MASTER
63. COGEN LAYDOWN ACCESS GATE	MASTER
64. COGEN CAPITAL SPARES ACCESS GATE	MASTER
65. COGEN CAPITAL SPARES ACCESS GATE	MASTER
66. COGEN CAPITAL SPARES ACCESS GATE	MASTER
67. COGEN CAPITAL SPARES ACCESS GATE	MASTER
68. COGEN SWITCHYARD NORTH ACCESS GATE	MASTER
69. COGEN SWITCHYARD SOUTH ACCESS GATE	MASTER

CONCRETE BARRIER LOCATIONS: (#)



NO.	REVISION	DATE	TEAR	BY	APP
1	UPDATED PER SECURITY REQUEST	9/21/98	N/A	MAG	TEB
2	UPDATED PER SECURITY REQUEST	9/21/04	N/A	MAG	JR
3	UPDATED PER FIELD WALK DOWN	4/15/08	N/A	MAG	

REFERENCE DRAWINGS

OCCIDENTAL CHEMICAL CORPORATION
INGLESIDE PLANT

INGLESIDE PLANT FENCE, GATES, CAMERAS, CONC. BARRIERS PLOT PLAN

DRAWN BY _____ DATE _____
APP BY _____ DATE _____

SCALE	COST CENTER	TYPE	SIZE	DRAWING NUMBER	REV
1" = 400'-0"	925	81	D	1002-GATES	3

10/19/2023 6:24:59 AM

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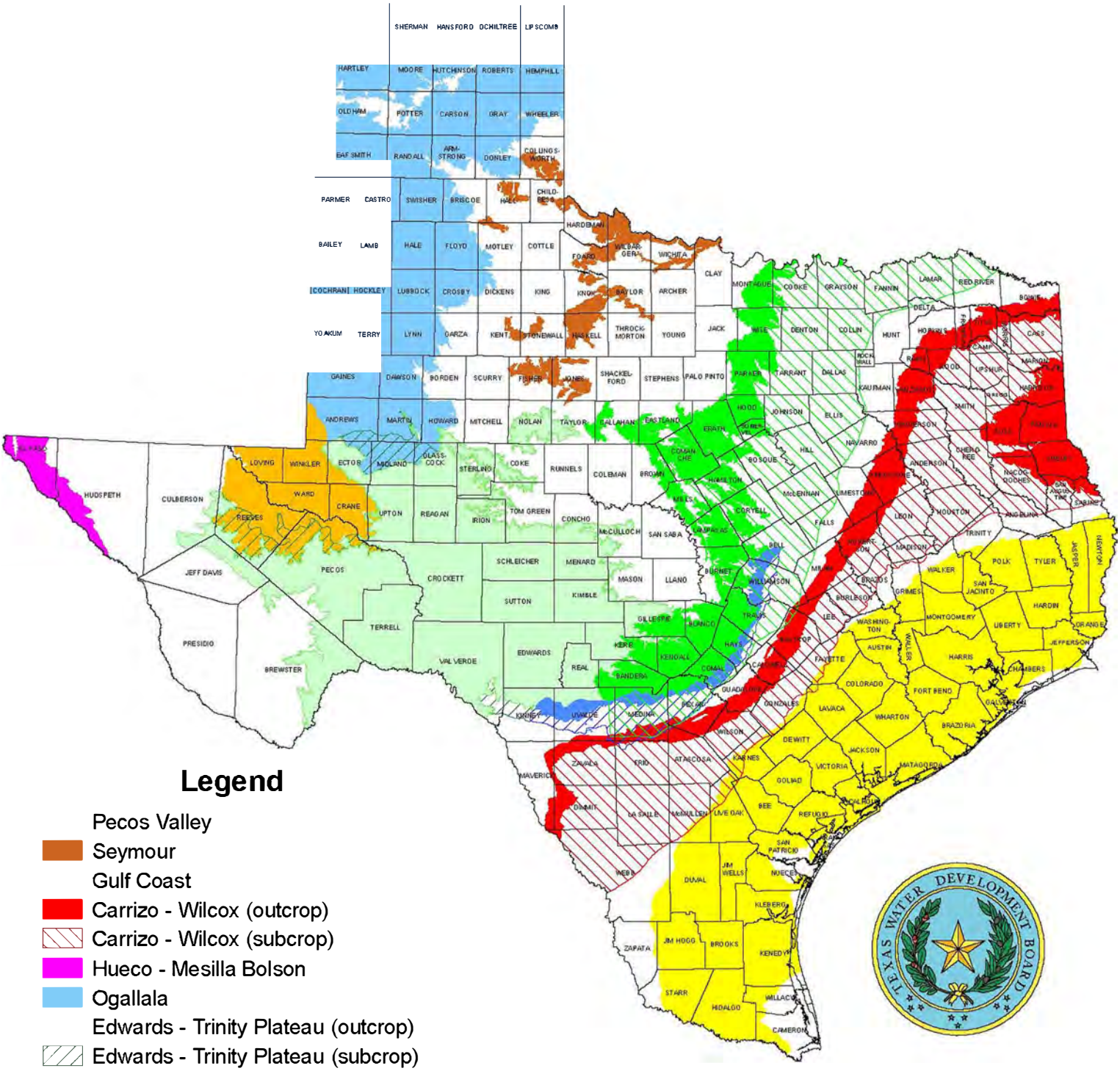
Figure 4 Sole Source Aquifers in Texas

Figure 5

Major Aquifers of Texas



Legend

- Pecos Valley
- Seymour
- Gulf Coast
- Carrizo - Wilcox (outcrop)
- Carrizo - Wilcox (subcrop)
- Hueco - Mesilla Bolson
- Ogallala
- Edwards - Trinity Plateau (outcrop)
- Edwards - Trinity Plateau (subcrop)
- Edwards BFZ (outcrop)
- Edwards BFZ (subcrop)
- Trinity (outcrop)
- Trinity (subcrop)

NOTE: Chronology by Geologic age

OUTCROP (portion of a water-bearing rock unit exposed at the land surface)
SUBCROP (portion of a water-bearing rock unit existing below other rock units)

W E

25 50 100 150 200 Miles

DISCLAIMER
This map was generated by the Texas Water Development Board using GIS (Geographic Information System) software. No claims are made to the accuracy or completeness of the information shown herein nor to its suitability for a particular use. The scale and location of all mapped data are approximate.

Map updated December 2006 by Mark Hayes, GISP

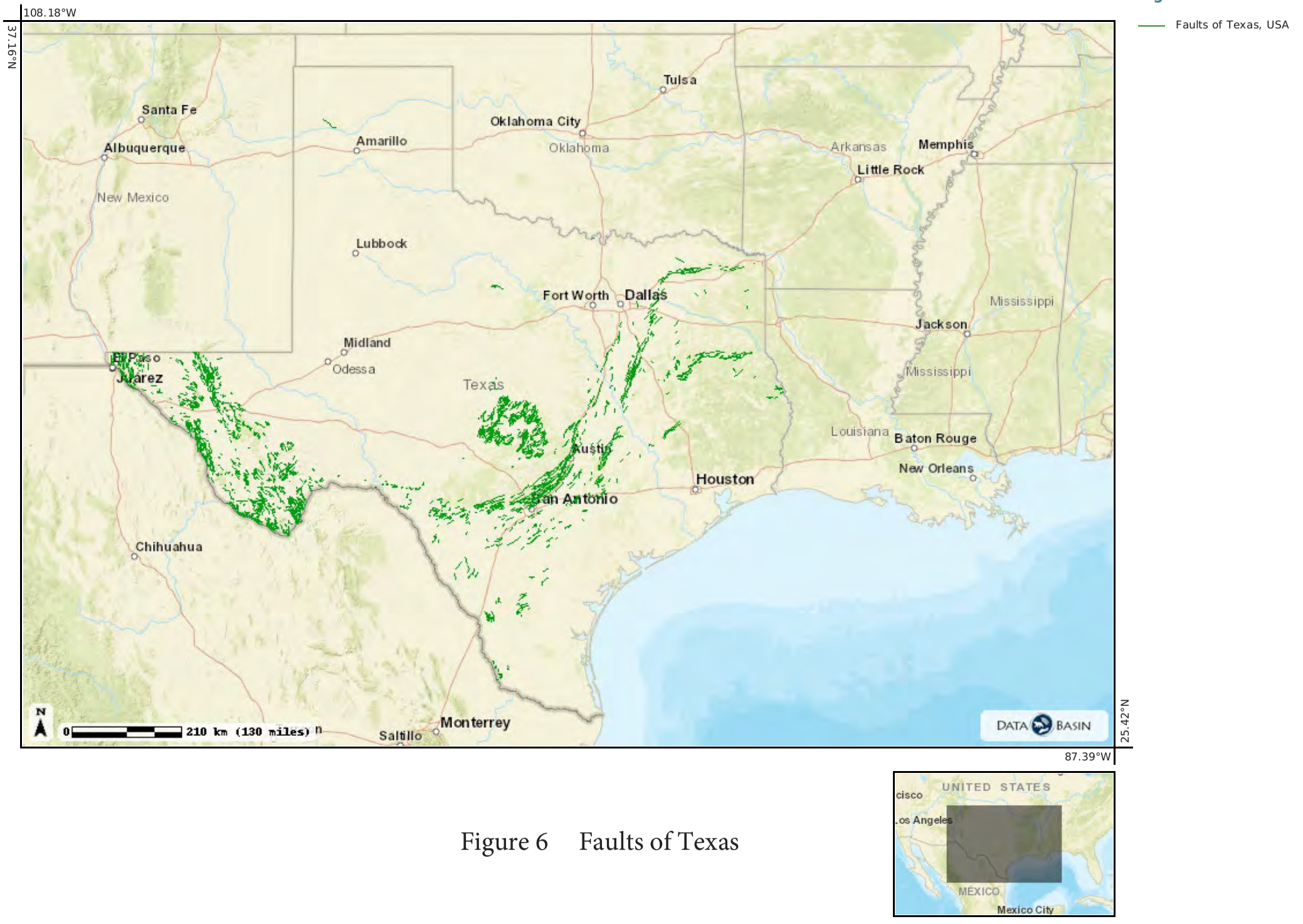


Figure 6 Faults of Texas

Map Details

Datasets

Faults of Texas, USA

https://databasin.org/datasets/fbba1515a9c14104bace5bfd29d2dbdd/

Credits: Douglas B. Stoeser, Gregory N. Green, Laurie C. Morath, William D. Heran, Anna B. Wilson, David W. Moore, Bradley S. Van Gosen

Layers:

- Faults of Texas, USA

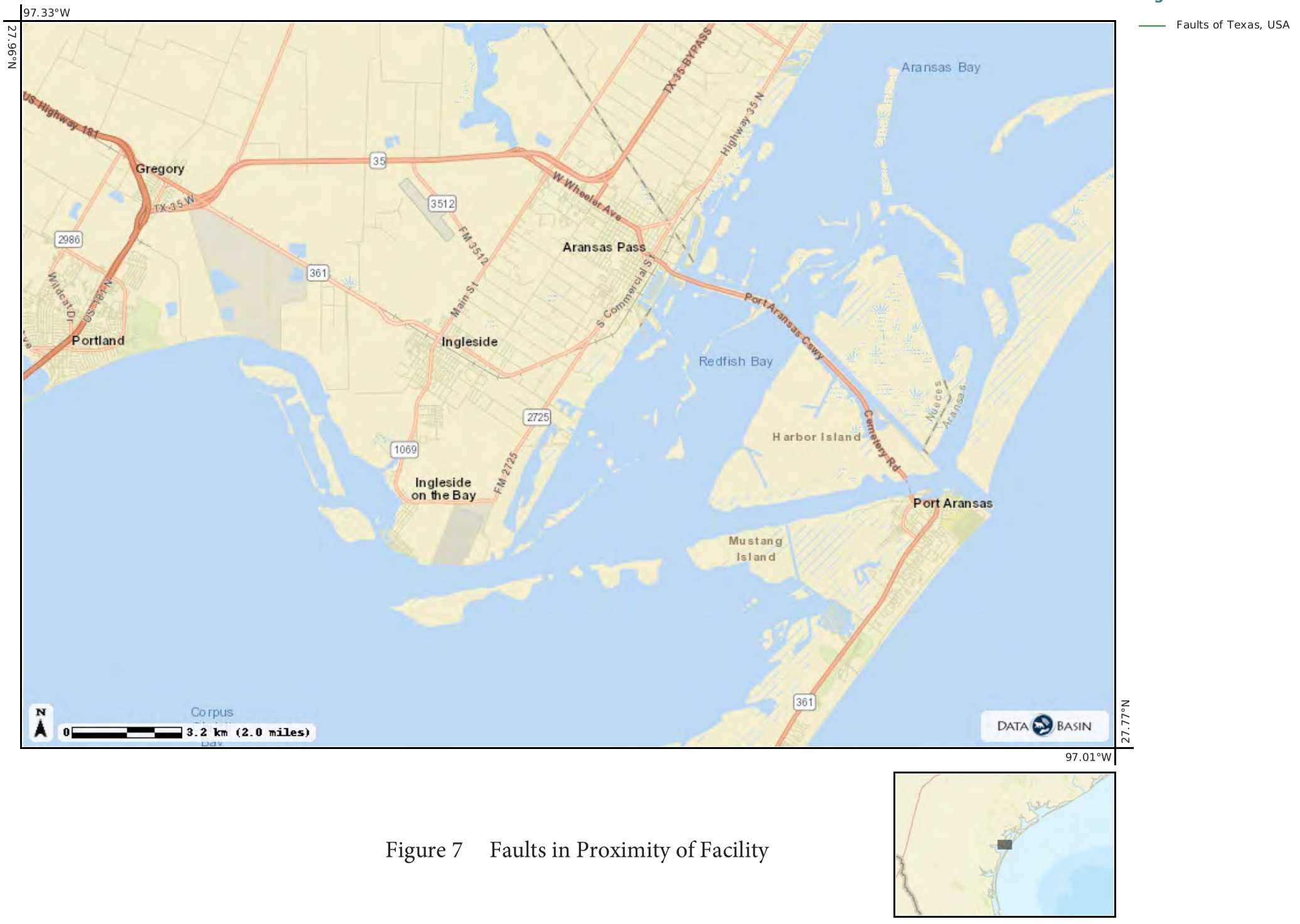


Figure 7 Faults in Proximity of Facility

Map Details

Datasets

Faults of Texas, USA

https://databasin.org/datasets/fbba1515a9c14104bace5bfd29d2dbdd/

Credits: Douglas B. Stoeser, Gregory N. Green, Laurie C. Morath, William D. Heran, Anna B. Wilson, David W. Moore, Bradley S. Van Gosen

Layers:

- Faults of Texas, USA

Appendix A

Water Well Report

Water Well Search

P.O. Box 5239 Austin, TX 78763
Tel:800.583.0004, Fax:888.756.7647

7/17/2025

CSSI6627

Compliance Strategies & Solutions Inc.
Chemours Plant Rd, Ingleside, TX
OxyChem

Thank you for contacting TelALL Corporation for the attached Water Well Search. All properly filed water well records have been reviewed at both the Texas Water Development Board and the Texas Commission on Environmental Quality (formerly TNRCC). The following is a description contained in these agencies.

Texas Water Development Board

This agency maintains locations and well information of the water wells it has inventoried. The locations are mapped on USGS topographic maps and on county highway maps. Both types of maps have been reviewed for this search.

Texas Commission on Environmental Quality

This agency maintains the files of all water well logs submitted to the Water Well Drillers Board that have not been incorporated into the Water Development Board's located well records. Initially these well records were given a state well number and plotted on a county highway map based on the information submitted by the driller. These wells are referred to as plotted wells. Multiple plotted wells may have the same well number. In 1986, the state stopped plotting these wells. These wells were given a partial well number that corresponds to the geographical groundwater section they are filed in. For this reason, these wells are referred to as partially numbered wells. All groundwater files concerning these three types of well records have been reviewed for this search.

USGS

The USGS maintains information on 1.5 million wells nationwide to investigate the occurrence, quantity, distribution, and movement of surface and underground waters. State and local governments, public and private utilities, and other Federal agencies are involved with managing the water resources.

If you have any questions concerning this project, or need additional information please call us at 800-583-0004.

Regards,

TelALL Corp.

We have made every effort to provide complete and accurate information, but we assume no responsibility for inaccurate or incomplete information.

Mapped Water Well

Site

Site Locations are Approximate Only

0 0.25 0.5

1 inch = 0.17 mile(s)

Recent NAIP Photo

(Natural Image)

TelALL™ Corporation

(800) 583-0004 WWW.TelALL.NET

Water Well Search

Summary of wells

Job CSSI6627
Date 7/17/2025

Map #	State ID	Owner	Completed	Type	Grid #	Depth (ft)	Lat/Long*	Comments
1	62053	Dupont Corporation	22-Jun-05	Monitor		28	27.885 / -97.2453	
	https://www3.twdb.texas.gov/apps/waterdatainteractive//GetReports.aspx?Num=62053&Type=SDR-Well							
2	62056	Dupont Corporation	22-Jun-05	Monitor		28	27.885 / -97.2453	
	https://www3.twdb.texas.gov/apps/waterdatainteractive//GetReports.aspx?Num=62056&Type=SDR-Well							
3	109722	Alcoa, Inc.	9-Jan-07	Monitor		35	27.8917 / -97.2508	
	https://www3.twdb.texas.gov/apps/waterdatainteractive//GetReports.aspx?Num=109722&Type=SDR-Well							
4	109725	Alcoa, Inc.	8-Jan-07	Monitor		20	27.8922 / -97.2503	
	https://www3.twdb.texas.gov/apps/waterdatainteractive//GetReports.aspx?Num=109725&Type=SDR-Well							

*Note: lat/long well locations are approximate only

Appendix B

Soil Report

Figure 5 Soil Map

Soil Map—Nueces County, Texas, and San Patricio and Aransas Counties, Texas
(OxyChem Ingleside Plant)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Nueces County, Texas
Survey Area Data: Version 23, Aug 30, 2024

Soil Survey Area: San Patricio and Aransas Counties, Texas
Survey Area Data: Version 21, Aug 30, 2024

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 18, 2023—Oct 20, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
W	Water	6.6	0.6%
Subtotals for Soil Survey Area		**6.6**	**0.6%**
Totals for Area of Interest		**1,160.8**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ec	Banquete clay, 0 to 1 percent slopes	114.8	9.9%
Ed	Edroy clay, 0 to 1 percent slopes, occasionally ponded	14.1	1.2%
MoD	Monteola clay, 5 to 8 percent slopes	15.8	1.4%
Os	Calallen sandy clay loam, 0 to 1 percent slopes	280.2	24.1%
PaA	Papalote fine sandy loam, 0 to 1 percent slopes	63.0	5.4%
RaA	Raymondville clay loam, 0 to 1 percent slopes	249.6	21.5%
RaB	Raymondville clay loam, 1 to 3 percent slopes	9.9	0.9%
Ur	Urban land	4.1	0.4%
VcA	Victoria clay 0 to 1 percent slopes	402.7	34.7%
Subtotals for Soil Survey Area		**1,154.2**	**99.4%**
Totals for Area of Interest		**1,160.8**	**100.0%**

Appendix C

Flood Maps

NOTES TO USERS

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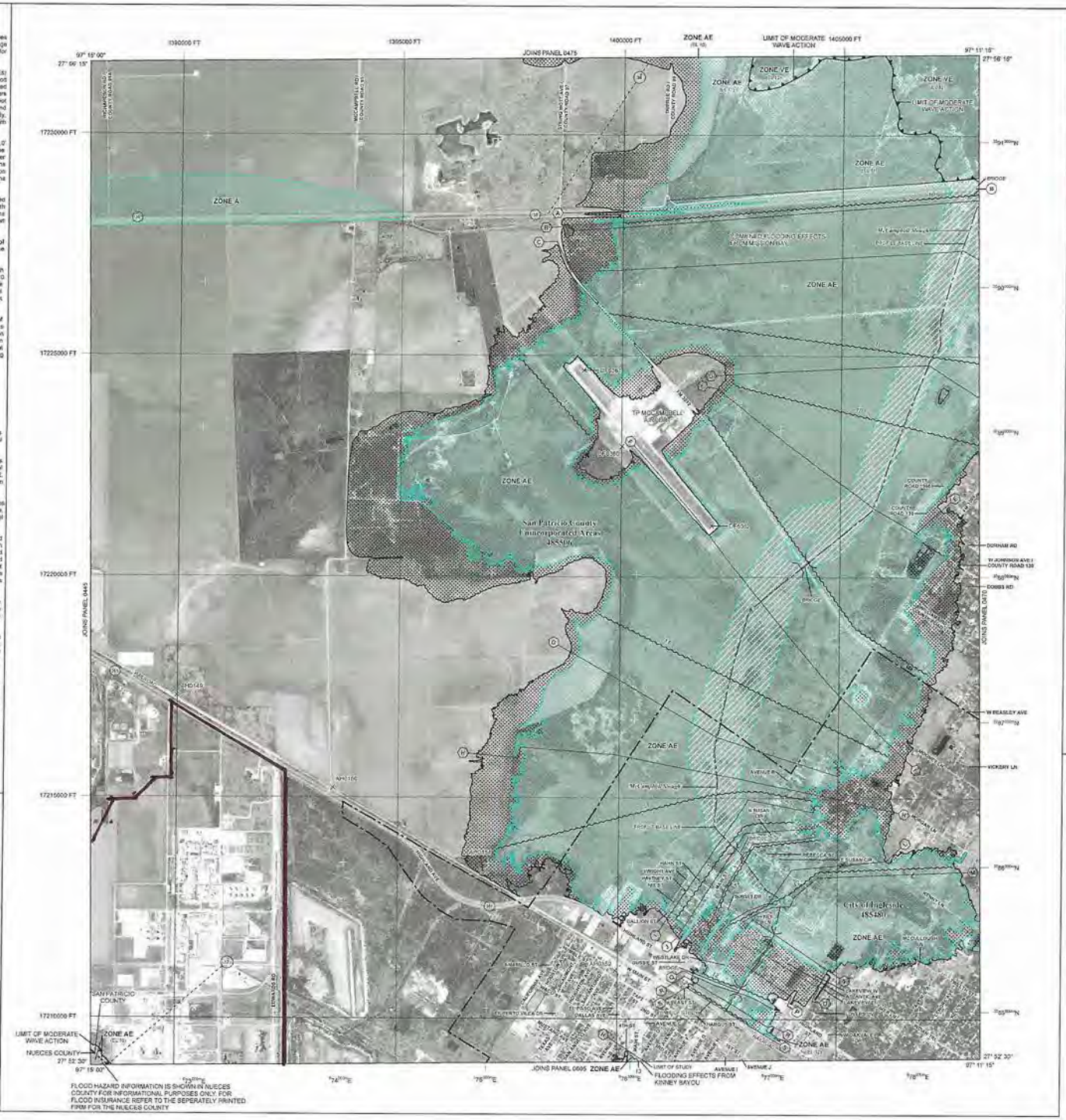

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

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- ZONE A — No Base Flood Elevations determined.
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- ZONE AR — Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99 — Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN NON-COASTAL ZONE AE

RIVERINE FLOODWAY SHOWN IN COASTAL ZONE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood

OTHER AREAS

- ZONE X — Areas determined to be outside the 0.2% annual chance floodplain
- ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are generally located within or adjacent to Special Flood Hazard Areas.

- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
- Limit of Moderate Wave Action
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- (A) — (A) — Cross section line
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MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
NOVEMBER 4, 2016

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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MAP SCALE 1" = 1000'
500 0 1000 2000 FEET
150 0 300 600 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0465E

FIRM
FLOOD INSURANCE RATE MAP
SAN PATRICIO COUNTY, TEXAS AND INCORPORATED AREAS

PANEL 465 OF 650
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS

COMMUNITY	NUMBER	PANEL	SUFFIX
INGLESIDE, CITY OF	485480	0465	E
SAN PATRICIO COUNTY	485493	0465	E

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48409C0465E
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Federal Emergency Management Agency

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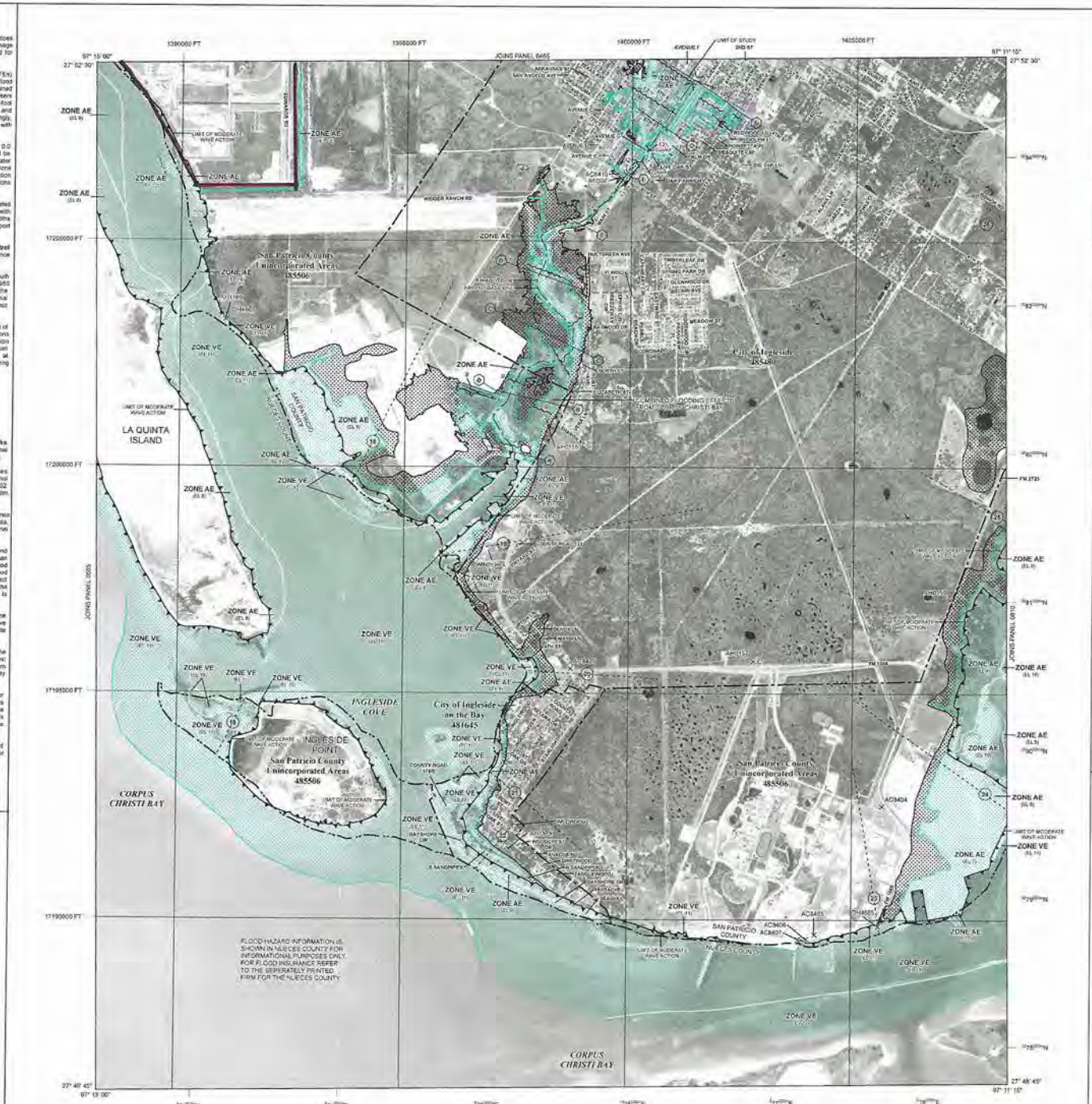

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NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0605E

FIRM

FLOOD INSURANCE RATE MAP

SAN PATRICIO COUNTY, TEXAS AND INCORPORATED AREAS

PANEL 505 OF 650
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
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INGLESIDE ON THE BAY, CITY OF	481645	0605	E
SAN PATRICIO COUNTY	485506	0605	E

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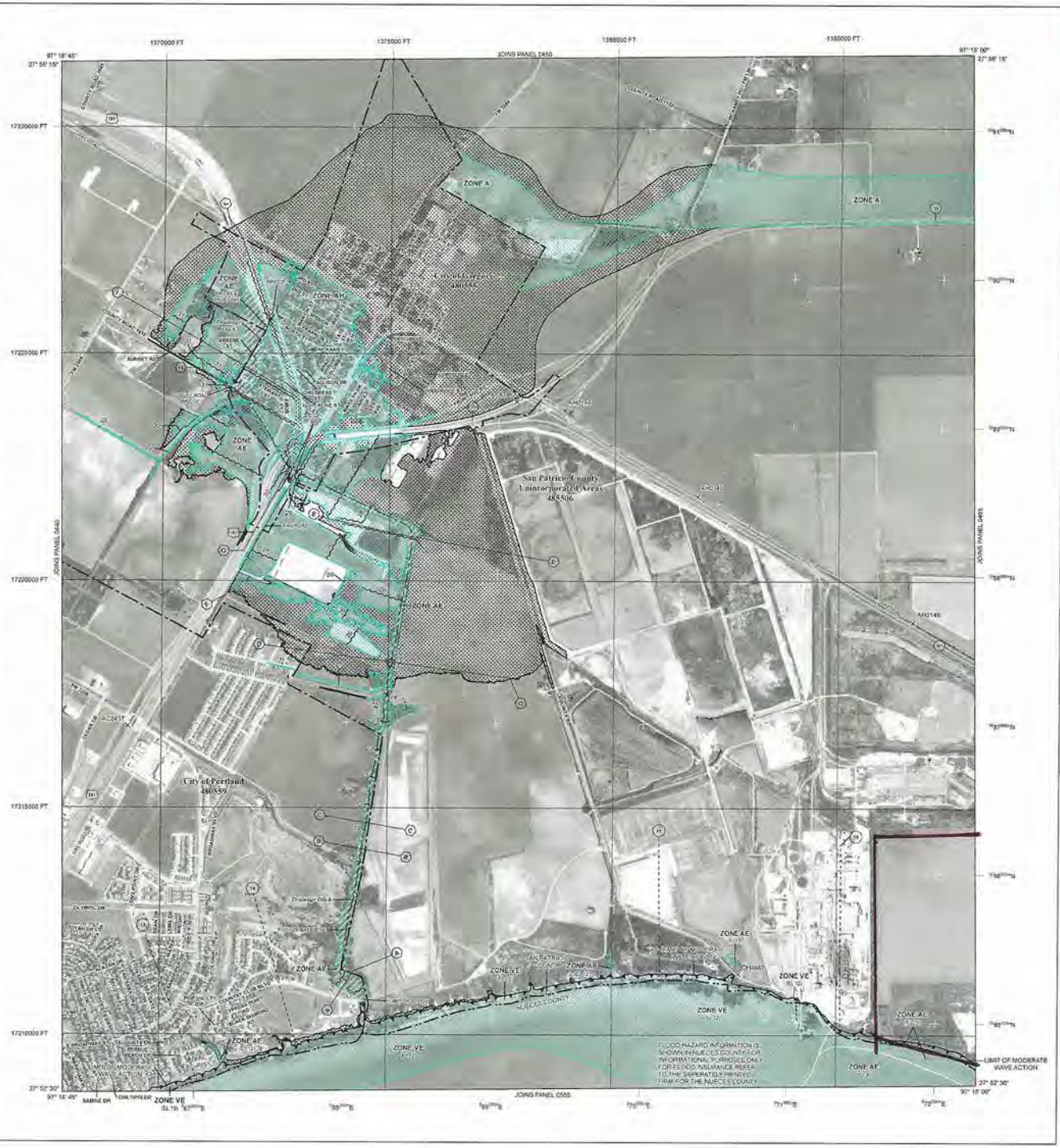
1370000 FT
1375000 FT
1380000 FT
1385000 FT
97° 18' 45"
97° 15' 00"
27° 56' 15"
27° 54' 15"
17230000 FT
17225000 FT
17220000 FT
17215000 FT
17210000 FT
27° 52' 30"
JOINS PANEL 0450
JOINS PANEL 0440
JOINS PANEL 0455
JOINS PANEL 0555
ZONE A
ZONE AE
ZONE AH
ZONE VE
City of Gregory 480276
San Patricio County Unincorporated Areas 485506
City of Portland 480559
NUECES COUNTY
FLOOD HAZARD INFORMATION IS SHOWN IN NUECES COUNTY FOR INFORMATIONAL PURPOSES ONLY. FOR FLOOD INSURANCE REFER TO THE SEPARATELY PRINTED FIRM FOR THE NUECES COUNTY
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COUNTY ROAD 1782
SUNSET ACRES
SABINE DR
CHALTWIN ER
AIRLINE DR
AIRLINE RD
AIRLINE DR
AIRLINE RD
AIRPORT RD
AIRPORT DR
AIRPORT RD
AIRPORT DR
AIRPORT RD
AIRPORT DR

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.[4]	Rated Capacity[3]	Dimensions	Containment Volume (including rainfall for unenclosed areas)	Unit will manage Ignitable[1], Reactive[1], or Incompatible[2] waste (state all that apply)	Unit Status
5	VCM	022	All	9,240 gal.	41' x 21'	4,560 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

Table of Contents

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2.0 Use and Management of Containers 2
2.1 Condition of Containers 2
2.2 Compatibility of Waste with Containers 2
2.3 Management of Containers 2
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2.5 Incompatible Wastes 3
2.6 General Procedures for Ignitable, Reactive, and Incompatible Wastes 3
2.7 Inspections 3
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4.0 Closure 6

Appendices

Appendix A Example Inspection Form
Appendix B Design Drawings
Appendix C Closure Plan and Cost Estimate

1.0 General Information

OxyChem utilizes one container storage area, the VCM Container Storage Area, for storing and managing hazardous wastes prior to subsequent processing, treatment, and/or disposal. This container storage area receives wastes from various onsite sources, which primarily consist of production and maintenance waste streams from facility operations. Since this area may store hazardous wastes for greater than 90 days, it is subject to RCRA permitting requirements. This report has been prepared to provide technical information for the VCM Container Storage Area in accordance with 30 TAC 305.50 as well as relevant TCEQ application form requirements.

The VCM Container Storage Area is situated on a concrete foundation that is curbed with dimensions of 41 feet by 21 feet, and it has a maximum capacity of 9,240 gallons for storing and managing wastes destined for subsequent processing, treatment, and/or disposal. The unit consists of a building that is covered by a roof and has walls on four sides. The sizes of individual containers may vary (e.g., 55 gallons, 1 cubic yard, etc.), but the total volume stored in the unit will not exceed 9,240 gallons. The unit receives materials with free liquids and no free liquids and manages ignitable and reactive hazardous wastes. Wastes managed in the VCM Container Storage Area can be any of those identified in the Waste Analysis Plan (Attachment IV.D).

This unit report provides operational information associated with the VCM Container Storage Area as well as information regarding design of the unit.

2.0 Use and Management of Containers

The following sections specify procedures for the use and management of hazardous waste containers at the VCM Container Storage Area.

2.1 Condition of Containers

Before receiving containers with hazardous wastes at the unit, they are inspected for structural integrity. As described in Section 2.7, the unit is inspected at least weekly with container condition being one of the primary inspection criteria. Containers are inspected to verify that they do not have damage and/or do not contain significant amounts of corrosion that could impact their integrity.

2.2 Compatibility of Waste with Containers

OxyChem carefully manages hazardous wastes to ensure that they are managed in a safe manner. Prior to storage, wastes are evaluated to ensure that they are placed in containers made of materials compatible with the waste. To support selection of compatible containers, facility personnel evaluate waste properties (as described in the Waste Analysis Plan) and compare those properties with container compatibility guides (e.g., Department of Transportation's material packaging regulations) to verify compatibility.

2.3 Management of Containers

Containers are sealed or closed with a cover (e.g., tarp), which remains over the container (e.g., roll off) except during filling or removal activities. With the exception of sampling or inspection, once covers on containers are in place, they are not removed until subsequent processing, treatment and/or disposal. Also, containers are managed such that the potential for releases from them is minimized by providing for safe operating practices.

2.4 Ignitable or Reactive Wastes

The VCM Container Storage Area is located well in excess of the 50-foot from the property line per the requirement of 40 CFR 264.176.

2.5 Incompatible Wastes

Incompatible wastes are not managed in the VCM Container Storage Area.

2.6 General Procedures for Ignitable, Reactive, and Incompatible Wastes

The facility carefully manages hazardous waste to ensure that ignitable and reactive wastes are managed in a safe manner. As further detailed in Attachment III.D (Inspection Plan) of this application, inspections of the VCM Container Storage Area are performed at least once each week.

Flammable/ignitable wastes are kept away from potential ignition sources. Smoking is not allowed at the facility except in designated smoking areas. Spark-producing materials are kept out of the facility, except by special permit and will only be used when it can be demonstrated (e.g., via measurement) that volatile vapors are not present. Drums containing flammable wastes are grounded and spark-resistant tools are used while handling these drums.

2.7 Inspections

As mentioned, weekly inspections of the VCM Container Storage Area are conducted. The Inspection Plan (Attachment III.D) describes the approach used for performing inspections. Appendix A of this report contains an example weekly inspection form used for the VCM Container Storage Area. The form is provided for illustration of typical forms that are used at the facility to conduct inspections. Specific details of forms and components used at the facility may change over time (e.g., number and location of fire extinguishers may change); however, the overall content of the forms will continue to provide compliance with the inspection requirements for the unit. Unless a revision is proposed to the inspection schedule (i.e., frequency), the application will not be updated (i.e., a modification submitted) when changes to forms are made. Instead, copies of current forms will be available at the facility for review.

2.8 Subpart CC Requirements

As further described in the Air Emissions Report (Attachment X), air emission standards for containers (40 CFR 264, Subpart CC) are applicable to containers having a volatile organic (VO) concentration of 500 ppm or greater. Since some wastes stored in the VCM Container

Storage Area have a VO concentration above 500 ppm, those containers are subject to Subpart CC requirements.

Containers managed in the unit comply with either the Level 1 or Level 2 requirements for containers as described in the Air Emissions Report.

3.0 Unit Details

With dimensions of 41 feet by 21 feet and 8-inch curbing, the VCM Container Storage Areas has approximately 860 square feet of curbed and covered floor space and has a secondary containment volume of 4,560 gallons. 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.

- 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 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.

Appendix A

Example Inspection Form

Prepared by: C. Cuellar
Rev: KJH 07/10/18

OXY Chem Ingleside Weekly Inspection

VCM Container Storage Area - Permit Unit No. 5

Inspection Item	Check if OK	Corrective action required or additional comments
Foundation/Liner is not cracked or deteriorated		
External undermining of foundation not visible		
No liquid or debris in trench		
Center aisle is clear		
18" space between pallet and wall		
No visible spills/leaks		
Drums in good condition		
Containers segregated		
Properly labeled/closed		
All containers meet USDOT specifications in 49 CFR Part 178		

OxyChem Waste Code #	Quantity of Containers	Comments
TOTAL CONTAINERS		

Inspector: _____ **Date:** _____ **Time:** _____

Corrective Action Status (if necessary): _____

OXY Chem Ingleside Weekly Inspection

VCM Container Storage Area - Permit Unit No. 5

OxyChem Waste Code #	Quantity of Containers	Comments
TOTAL CONTAINERS		

Corrective Action Status (if necessary): _____

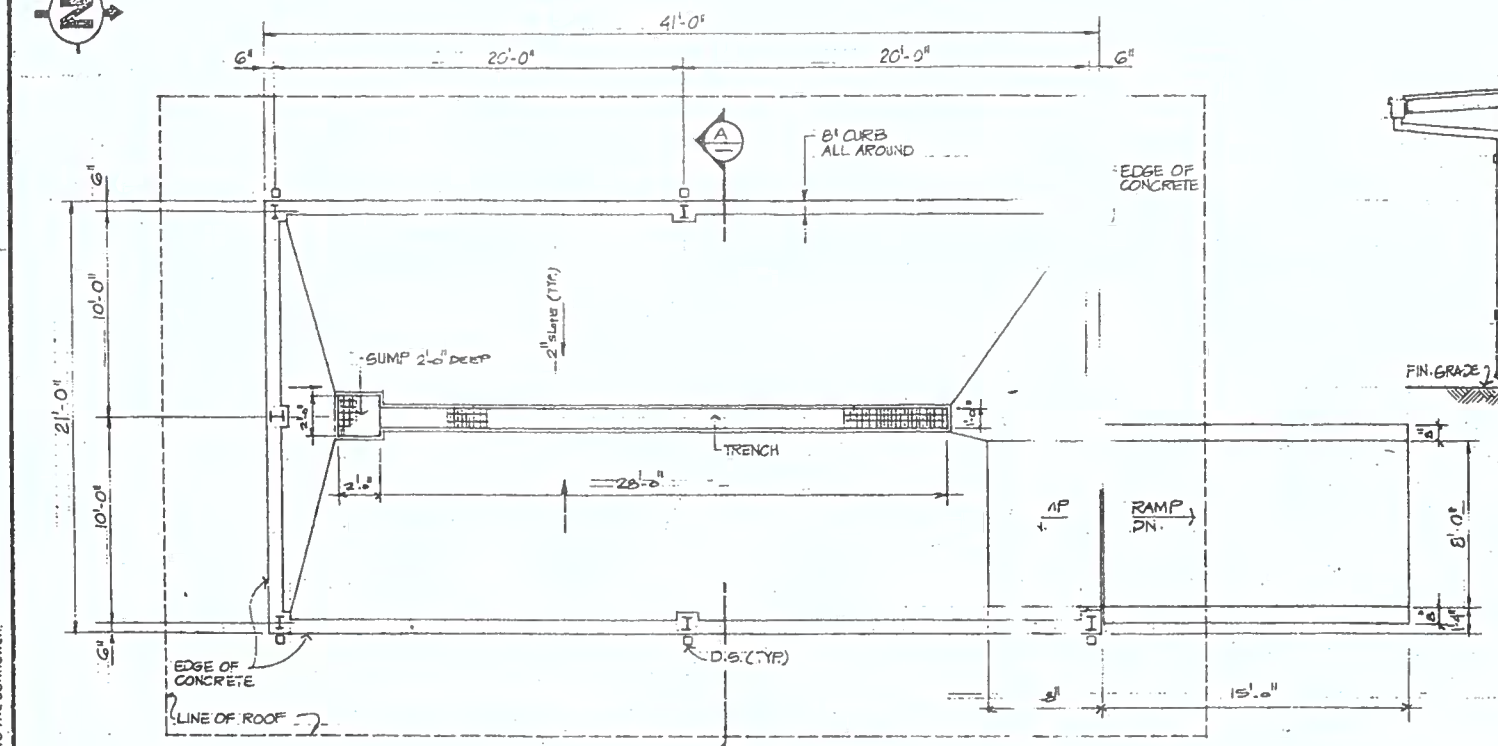
_____

_____

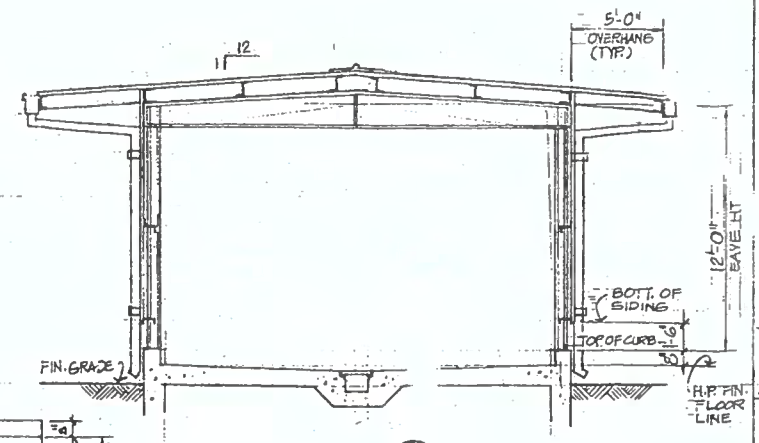
Appendix B

Design Drawings

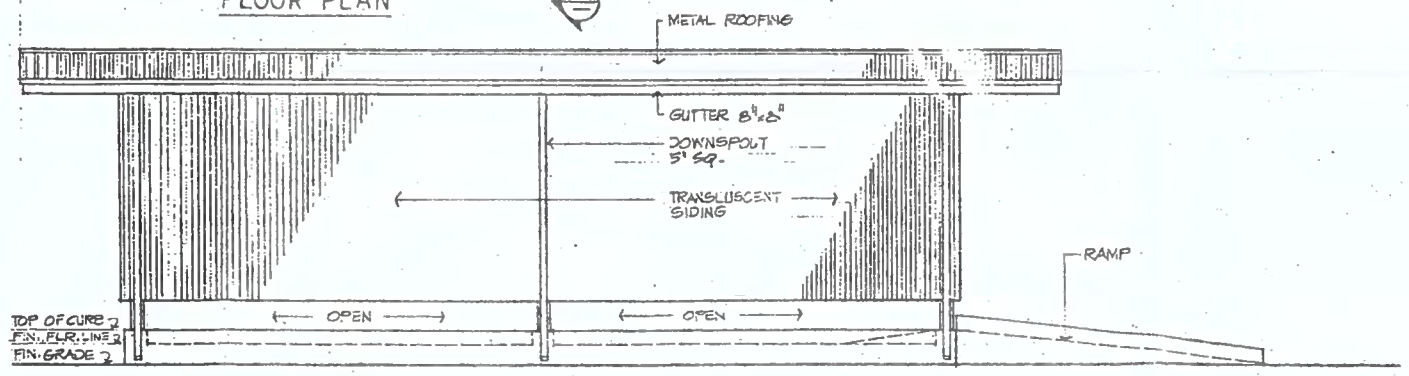
THIS DRAWING AND THE DESIGN IT COVERS ARE THE PROPERTY OF BECHTEL. THEY ARE MERELY LOANED AND ON THE BORROWER'S EXPRESS AGREEMENT THAT THEY WILL NOT BE REPRODUCED, COPIED, LOANED, EXHIBITED, OR USED EXCEPT IN THE PRIVATE USE PERMITTED BY ANY WRITTEN CONSENT GIVEN BY THE LENDER TO THE BORROWER.



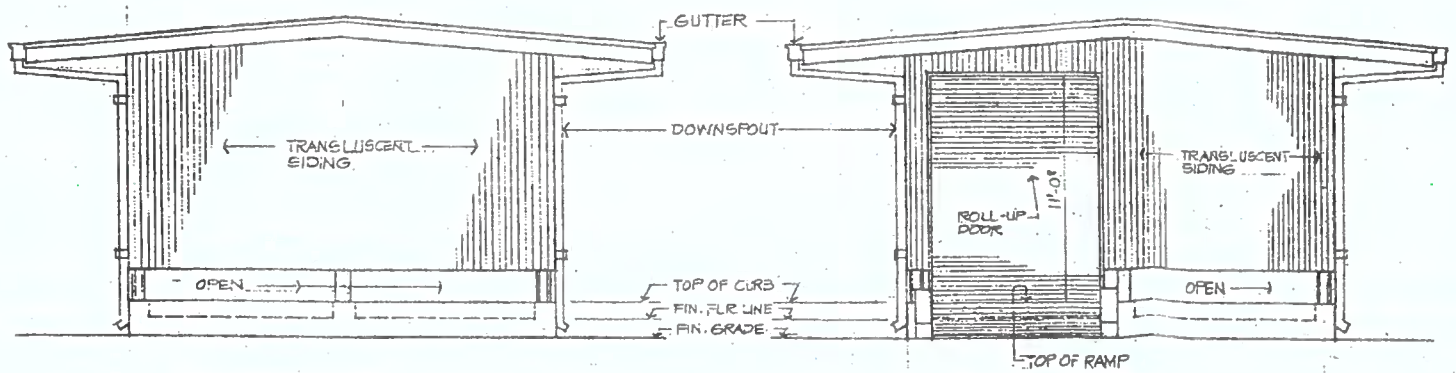
FLOOR PLAN



SECTION A-1



EAST ELEVATION



SOUTH ELEVATION

NORTH ELEVATION

GENERAL NOTES

1. BUILDING STEEL FRAME (COLUMNS, BEAMS, GIRTS, PURLINS) PAINTED (MFR. PAINT) W/EXTERIOR PER SPEC. 19611-R-10
2. PRE-ENGINEERED BUILDING DESIGN CRITERIA:
   WIND LOADS PER ANSI A58.1-1982
   BASIC WIND SPEED "V" SHALL BE 110 MPH
   IMPORTANCE FACTOR "I" SHALL BE 1.05
   K_{z_t}, G_H, G_Z 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.
   METAL PAINT DOOR, HOOD & HOIST COVER TO MATCH METAL SIDING.
   ROLLING DOOR 1 "OVERHEAD DOOR" FCN 2.
   REFER SPEC. 19611-R-13
4. VERIFY PURLIN & GIRT SPACING TO MEET DESIGN LOADS & MAXIMUM PERMISSIBLE SPANS FOR METAL ROOF & TRANSLUCENT SIDING.
5. TRENCH & SUMP GRATING: 2½" x ¼" W/ BARS @ 1 3/16" O.C.
   PROVIDE CONTINUOUS ST. ANGLE FRAME FOR GRATING.
   SLOPE TRENCH 4" TO SUMP.
6. REFER DRWG. 90-001-901 FOR P.I.D. PLAN
7. "FINISH GRADE" 16 TO BE AT ELEV. 17.5 FT.
8. "FINISH FLOOR" 19 TO BE AT ELEV. 18.5 FT.

Appendix V.D.-3

NO.	DATE	REVISIONS	BY	CHK'D	DESIGN DEPT.	DRAFTS	FIELD ENGR.	APPR.
1	6/29/89	ISSUED FOR DESIGN, COMMERCIAL, ENG. COORDINATION	MR	RS				
2	9/1/89	ISSUED FOR CONSTRUCTION	JRB	RA				

SCALE 1/4"=1'-0" | DESIGNED VS | DRAWN JRB | CHK'D

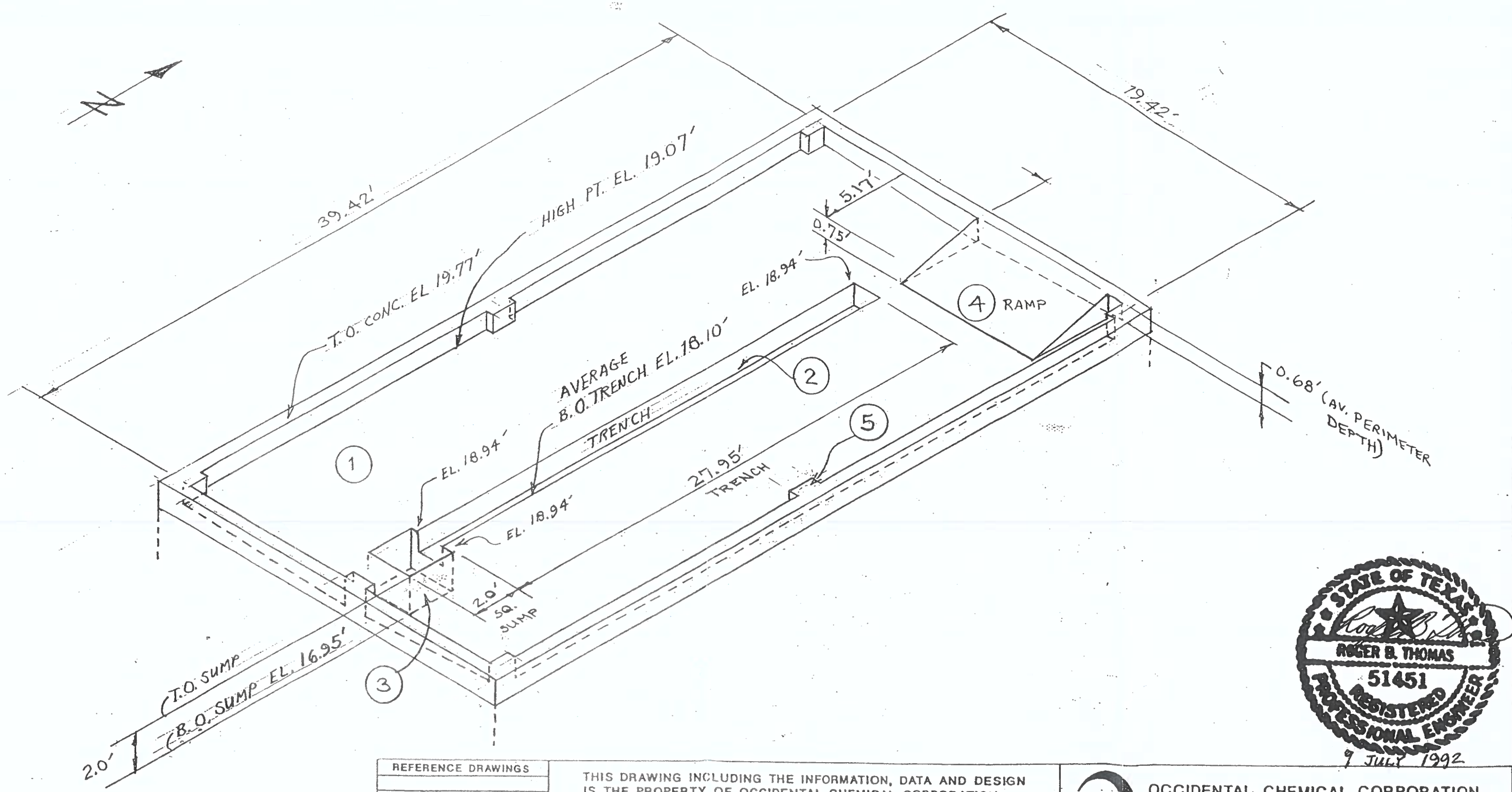
BECHTEL, INC.
HOUSTON

OXYMAR
CORPUS CHRISTI VCM PLANT
INGLESIDE, TEXAS

R.C.R.A. DRUM STORAGE
FLOOR PLAN, ELEVATIONS, BLDG. SECT.

AREA DESIGNATION	TYPE	EWR NUMBER	AFE NUMBER

JOB NO.	DRAWING NO.	REV.
19611	9D-00-R-055	



STATE OF TEXAS
ROGER B. THOMAS
51451
REGISTERED PROFESSIONAL ENGINEER
9 JULY 1992

Appendix V.B.-4

REFERENCE DRAWINGS

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OXY. OCCIDENTAL CHEMICAL CORPORATION
CORPUS CHRISTI, TEXAS

R.C.R.A. DRUM STORAGE AREA

SHT. 1 OF 2

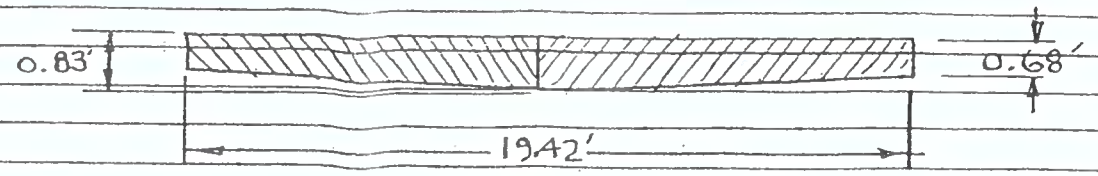
NO.	REVISION	BY	DATE	APP	APP

SIGNATURES	DATE
DRAWN BY	
CHECKED BY	
APPROVED BY	
SCALE:	

EWR NUMBER	AFE NUMBER	AREA DESIGNATION	TYPE	SIZE	DRAWING NUMBER	REV.
				B	-002	

TEXAS 44-232

(1) GROSS VOLUME, BASIC CONTAINMENT AREA :



CROSS - SECTION (TYPICAL)

$A = (0.83' + 0.68')(19.42')(0.5)$

$A = 14.66\ ft.^2$

Vol_{GROSS} = AREA × LENGTH

= 14.66 ft^2 × 39.42 ft.

= 577.9 $ft.^3$

(2) TRENCH VOLUME :

Vol. = L × W × D

Vol. = 27.95' × 1.0' × 0.84' = 23.48 $ft.^3$

(3) SUMP VOLUME :

Vol = L × W × D

= 2.0' × 2.0' × 2.0' = 8.0 $ft.^3$

(4) RAMP :

Vol = ½ × D × W × L

= ½ × 0.75 × 5.17 × 8.0 = 15.51 ^{3}

(5) COLUMN PEDESTALS : (4 × ¼) + (4 × ½) = 3 UNITS

EA. UNIT : V = (0.68')(1.0')(0.33') = 0.22 × 3 = 0.67 $ft.^3$

NET VOLUME

Vol_{NET} = (1) + (2) + (3) − (4) − (5)

Vol_{NET} = 577.9 + 23.48 + 8.0 − 15.51 − 0.67

Vol_{NET} = 609.38 ft^3

OR 4,560 GALLONS

STATE OF TEXAS
ROGER B. THOMAS
51451
REGISTERED PROFESSIONAL ENGINEER

9 JULY 1992

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NO.	REVISION	BY	DATE	APP.	APP.

SIGNATURES	DATE
DRAWN BY	
CHECKED BY	
APPROVED BY	
SCALE:	

EWR NUMBER	AFE NUMBER	AREA DESIGNATION	TYPE	SIZE	DRAWING NUMBER	REV
				B	-002	

OXY. OCCIDENTAL CHEMICAL CORPORATION
CORPUS CHRISTI, TEXAS

R.C.R.A. DRUM STORAGE AREA

SHT. 2 OF 2

TEJAS 44-232

Appendix C

Closure Plan and Cost Estimate

VCM Container Storage Area

Closure Plan and Cost Estimate

OxyChem
Ingleside, Texas

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Table 2 Closure Schedule
Table 3 Closure Cost Estimate for VCM Container Storage Area

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Appendix A Supporting Information for Closure Cost Estimates

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.B).

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 x 1.042 x 1.070 x 1.036 x 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)
Closure activities begin – after 45 day notification	
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[1]
Waste removal and disposal of drums 3 hrs of labor @ $185/hr 168 drums @ $400/drum disposal (as a hazardous waste) 2 trip @ $1,348/trip transportation	$70
Decontaminate CSA with water and detergent flush with off-site hazardous waste disposal of all rinsate[2] 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	$6
Decontaminate clean-up equipment	$1.3
Sample, excavate, and dispose of surrounding soils as HW 12 hrs of labor @ $185/hr 1 day backhoe rental @ $1,200/day 23,760 pounds @ $0.65/lb[3] 1 trip @ $1,348/trip	$20
Laboratory charges 2 water samples @ $215 per analysis 4 soil samples @ $1,035 per analysis	$5
Engineer's inspection and certification 10 hrs labor @ $115/hr	$1.2
Subtotal	$104
25% Contingency	$26
VCM CSA Total	$130

[1] 2000 Dollars.

[2] An estimated 0.75 gallons per square foot of washwater will be needed to decontaminate the CSA secondary containment slab.

[3] See Appendix VII.A.-1 calculations for this volume.

Attachment V.C

Tanks and Tank Systems

Table V.C. – Tanks and Tank Systems

Permit Unit No.	Tank	N.O.R. No.	Storage and/or Processing	Waste Nos.[1]	Rated Capacity	Dimensions	Containment Volume (including rainfall for unenclosed areas)	Unit will manage Ignitable, Reactive, or Incompatible Waste (state all that apply)	Unit Status
6	C-720A	023	Storage	4,15,17,20,23	65,000 gallons	26’ diameter sphere	16,354.5 ft^3	Ignitable	Active
7	C-720B	082	Storage	4,15,17,20,23	65,000 gallons	26’ diameter sphere	16,354.5 ft^3	Ignitable	Active

[1] From Table IV.B, first column

Attachment V.C.1

C-720A Tank System

Attachment V.C.1

Tank C-720A Report

OxyChem
Ingleside, Texas

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Appendices

Appendix A Engineering Drawings
Appendix B Integrity Assessment Report
Appendix C Example Daily Inspection Form
Appendix D Closure Plan

1.0 Introduction

OxyChem - Ingleside, TX utilizes tanks for storing and managing hazardous wastes prior to subsequent processing and/or treatment. The tanks receive wastes from various sources, which primarily consist of production waste streams from the facility and other OxyChem facilities. Since these tanks may store hazardous waste for greater than 90 days and may also receive hazardous waste from offsite sources, they are subject to RCRA permitting requirements. This report has been prepared to provide technical information for the RCRA storage tank, which has a facility designation of Tank C-720A, in accordance with 30 TAC 305.50 as well as relevant TCEQ application form requirements.

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 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).

2.3 Secondary Containment

Secondary containment meeting the RCRA requirements of 40 CFR 264.193 is provided for Tank C-720A. As such, the containment system for Tank C-720A is designed using the following parameters:

- Containment is constructed of materials compatible with the wastes stored, and the containment surfaces are coated with an impermeable liner material (e.g., epoxy);
- Secondary containment for ancillary equipment in the immediate vicinity of the tank is provided by the secondary containment system associated with the tank system;
- Containment and associated foundation have adequate strength to prevent failure;
- Containment has a leak detection system that will detect a leak within 24 hours; and
- Liquids (e.g., spills, precipitation) can be removed from the containment within 24 hours.

Additional details regarding the above design parameters are provided below.

Secondary containment for Tank C-720A is provided via a concrete containment vault/external liner. The containment system is sufficient to contain 100% of the 65,000 gallon tank capacity as well as precipitation from a 25-year, 24-hour storm. Per RCRA requirements, the tank system is equipped with a leak detection system capable of detecting a leak within 24 hours. If liquids are released, their presence is detected through the daily inspections of the tank system performed by operations personnel. Significant liquids (i.e., not minor quantities of rainwater) detected in secondary containment will be removed immediately (within 24 hours). If removed liquids are wastes (i.e., not minor quantities of rainwater), response and investigation activities into the cause of the release will be launched immediately. Additional details on the response and investigation process are contained in a later section of this report.

Accumulated rainfall in the secondary containment system are removed as soon as practical (e.g., within 24 hours) so that adequate "freeboard" in the system can be maintained. The floor of the secondary containment system is slightly sloped toward a drainage sump to facilitate removal of rainwater from the system.

3.0 Operations and General Hazard Prevention

The location of Tank C-720A complies with siting restrictions of national codes. The tank is located approximately 2,000 feet from the nearest property boundary, approximately 2,500 feet from the closest public road (Highway 361 on the northern boundary of the plant), and approximately 4,000 feet from La Quinta Channel, which is along OxyChem's southern property boundary.

Section 2-3.1 of the National Fire Protection Association's (NFPA) Flammable and Combustible Liquid Code (NFPA 30) specifies maximum allowable distances from above-ground flammable or combustible liquid storage tanks to public ways, streets, alleys, and the facility's property line. Section 2-3.1.3 (Table 2-2) of that code, in particular, is applicable to OxyChem's Tank C-720A. The most stringent distance requirements of Table 2-2 provides a minimum distance of not less than 50 feet from any tank to the facility's property line that is or can be built upon, including the opposite side of a public way, and not less than 25 feet from the closest side of any public way. Based on the distances mentioned above, the tank is located well beyond the NFPA distance requirements for public ways and the facility's property line.

3.1 Normal Operations

Normal operations will vary depending on how tanks are fed. Since the tank is fed from piping from a known source, routine analysis and/or compatibility testing will not typically be necessary. During normal operations of RCRA tanks, including any future change of service (should it occur), OxyChem will ensure compatibility of materials, implement controls to prevent spills or overflows from the tank or containment system, and conduct/document inspections.

3.2 Waste Analysis

OxyChem will ensure that waste and materials placed in the same tank system are compatible. Since the tank is basically dedicated for use for a limited number of established waste streams, this should not be of concern unless a significant change in production processes occurs.

Hazardous waste will not be placed in a tank that has not been decontaminated if it previously held an incompatible waste or material. The facility will evaluate properties of wastes managed in the tank to verify that incompatibility of wastes does not occur. This evaluation

may consist of process knowledge and/or testing as described in the Waste Analysis Plan (Attachment IV.D).

4.0 Air Emission Standards for RCRA Tank Systems

4.1 Subpart BB Requirements for Ancillary Equipment

Tank C-720A is subject to the RCRA air emission standards of 40 CFR Part 264, Subpart BB as a result of materials (e.g., wastes demonstrating the characteristic of ignitability) managed in the unit.

Attachment X of this application (Air Emissions Report) describes requirements of Subpart BB emission standards as well as options available to the facility under that program. The following sections describe how Subpart BB is implemented for ancillary equipment associated with Tank C-720A. However, OxyChem may elect to implement other options available under the Subpart BB program described in Attachment X of this application. Since changes in Subpart BB program implementation options are not reflected in the modification table reflected in 40 CFR 270.42, options may be implemented by OxyChem without modification and are reflected in the facility operating record and updated information would be included as part of a significant application revision (e.g., renewal application, modification that significantly affects equipment, etc.).

40 CFR §264.1052 - Standards: Pumps in Light Liquid Service

Tank C-720A may have pumps in light liquid service and will monitor them on a monthly basis. Monitoring would be performed per the requirements of Subpart BB and EPA Method 21.

40 CFR §264.1053 - Standards: Compressors

Tank C-720A is not expected to have compressors in hazardous waste service.

40 CFR §264.1054 - Standards: Pressure Relief Devices in Gas/Vapor Service

Tank C-720A may have pressure relief devices in gas/vapor service.

40 CFR §264.1055 - Standards: Sampling Connecting Systems

Sampling of this tank is non-routine and typically consists of taking grab samples through inlet or exit piping. Therefore, it does not meet the definition of a "sampling connection system", and is not subject to this section.

40 CFR §264.1056 - Standards: Open-Ended Valves or Lines

Each open-ended valve or line is equipped with a cap, blind flange, plug or a second valve. The requirements of this section will be followed each time an open-ended line is opened.

40 CFR §264.1057 - Standards: Valves in Gas/Vapor Service or in Light Liquid Service

Each valve in gas/vapor and or light liquid service is monitored on a quarterly basis at a leak definition of 10,000 parts per million (ppm). When leaks are detected, repairs and instrument rechecks will be performed per regulatory requirements.

40 CFR §264.1058 - Standards: Pumps and valves in heavy liquid service, pressure relief devices in light liquid service or heavy liquid service, and flanges and other connectors

The facility performs evaluations of components in hazardous waste service. It is not expected that there will be components in heavy liquid service. If they are determined to be in heavy liquid service, the requirements of this section will be documented. When a leak is detected by visual, olfactory, or audible inspection, repair and monitoring requirements will be followed per the regulation.

40 CFR §264.1059 - Standards: Delay of Repair

When delay of repair is necessary and meets the requirements of this section, the facility may implement delay of repair in accordance with this section.

40 CFR §264.1060 - Standards: Closed-Vent Systems and Control Devices

Tank C-720A has a closed-vent system and control device for this unit.

40 CFR §264.1061 - Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Percentage of Valves Allowed to Leak

If the facility implements these alternative standards for Tank C-720A, it will be done in accordance with the requirements of this section.

40 CFR §264.1062 - Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Skip Period Leak Detection and Repair

If the facility implements these alternative standards for Tank C-720A, it will be done in accordance with the requirements of this section.

40 CFR §264.1063 - Test Methods and Procedures

The facility will follow monitoring procedures spelled out in EPA Method 21 to perform instrument checks of equipment.

40 CFR §264.1064 - Recordkeeping Requirements

As further described in the Air Emissions Report (Attachment X), the facility maintains records required by and in the manner identified in this section.

40 CFR §264.1065 - Reporting Requirements

As further described in the Air Emissions Report (Attachment X), the facility will submit semiannual reports in accordance with the requirements identified in this section.

4.2 Subpart CC Requirements for Tanks

As further described in the Air Emissions Report (Attachment X), air emission standards for storage tanks (40 CFR 264, Subpart CC) are applicable to tanks having a volatile organic (VO) concentration of 500 ppm or greater. Waste stored in Tank C-720A has a VO concentration above 500 ppm. As such, the tank is subject to Subpart CC requirements for tanks and complies with requirements for Level 2 Controls.

5.0 Tank Operations

5.1 Inspections

Tank C-720A is inspected at the frequency noted and for the equipment components reflected on the inspection schedule (Table III.D of the Part B application form). These inspections are performed by facility representatives, which may include contractors in certain situations. Records of inspections are maintained using a written or electronic inspection form to note problems or irregularities (failures). Based on these problems, work requests are submitted to rectify the problems. Inspection personnel are responsible for ensuring that appropriate corrective action is taken. The time of completion and the nature of the corrective action, as well as the name of the inspection personnel, are documented on the inspection form.

Records of inspections are maintained at the facility. These records may be maintained in a "paper" or "electronic" system and are kept as part of the facility operating record. Records are kept for at least three years from the date of the inspection and contain the following information:

- Date and time of the inspection;
- Name of the inspector conducting the inspection;
- Notations of observations made; and
- Date and description of any repairs or remedial actions taken.

Appendix C is an example daily inspection form for Tank C-720A. The form is provided only for illustration of typical forms used at the facility to conduct inspections. Specific details of forms and components (e.g., number and location of fire extinguishers dedicated for RCRA service will change) used at the facility may change over time; however, the content of the forms will continue to provide compliance with the inspection requirements for the unit. The application will not be updated (i.e., a modification submitted) when changes to forms are made. Instead, copies of current forms will be available at the facility for review.

5.2 Alarms

Tank C-720A has level indicator sensors, signal transmitters, and an alarm to prevent overfilling of tanks. The alarm will alert personnel in order to block out feed lines if an overfill alarm is reached or if leakage is detected.

5.3 Nitrogen Pad and Depad

Tank C-720A is equipped with a nitrogen "pad" system to fill the headspace and piping with slightly pressurized nitrogen. When the pressure in the tank drops below a set point, nitrogen is automatically fed to the tank. This prevents entry of oxygen into the tank and thus prevents ignitable conditions. Vented gas exits through a closed vent system to a control device. The tank is also equipped with a pressure valve to prevent excess pressurization of the tank.

5.4 Preparedness and Prevention

The facility places a high priority on the safety of employees and the public and prevention of damage to the environment. Hazards may occur due to routine operations but may also occur due to unpredictable events such as equipment failure, power outages, fires, or waste leaks or spills. In addition to compliance with RCRA regulations, OxyChem places an extra emphasis on facility design and operating procedures to prevent potential hazards from these sources. As described, Tank C-720A is equipped with safety systems (e.g., alarms, nitrogen padding, overfill alarms) to minimize the potential for leaks or ignitable conditions arising during normal operations. Manual block valves are provided to stop waste flow in case of equipment failure or power outages.

If a leak occurs in the tank system, spill containment and emergency response procedures as described in Section 5.6 will be initiated. Small, contained spills do not require implementation of the Contingency Plan and are collected and then treated and/or disposed of as soon as possible at an authorized facility. Should an emergency occur (i.e., a large spill, fire, or explosion), the Contingency Plan (Attachment III.E) will be implemented.

Since the tank manages ignitable waste, it is protected from sources of ignition. The two primary ignition prevention mechanisms are a nitrogen blanketing system and grounding of the tank to a common facility-wide cathodic protection/grounding system. Further, the tank is in a portion of the facility where smoking is strictly prohibited. Per Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code", a minimum separation distance from the tank to the property boundary is maintained.

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.

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

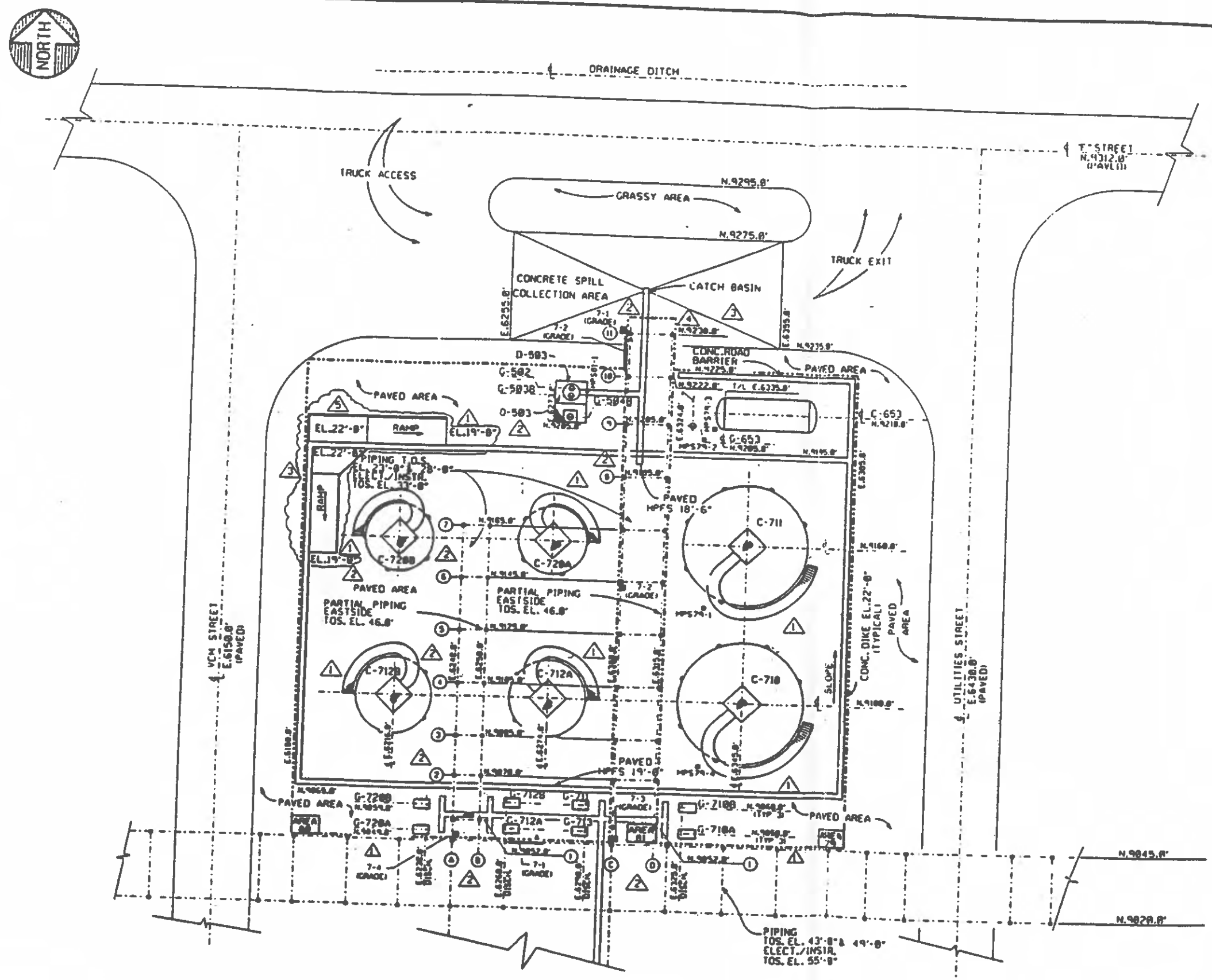
Inflows to the tank will be stopped if an emergency situation occurs involving the tank and/or ancillary equipment, including electrical or equipment failure, or fire. If necessary, the storage tanks may be cooled by using the tank farm water deluge system. Depending upon the magnitude of a spill, a 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 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

Engineering Drawings



COMPT. No.	DESCRIPTION	P.O.S. EL.
C-653	PROPYLENE REFRIG. STORAGE TANK	25'-8"
C-718	WET CRUDE EDC STORAGE TANK	22'-6"
C-711	DRY CRUDE EDC STORAGE TANK	22'-6"
C-712A & B	FINISHED EDC STORAGE TANKS	22'-6"
C-728A & B	EDC LIGHT ENDS & HEAVY ENDS STORAGE TANKS	22'-6"
D-583	EDC/ECO PROD STG AREA STM WTR TANK	
G-502	EDC/ECO PROD STG AREA STM WTR PUMP	
G-5838	EDC/ECO PMP STG UNC STM WTR PUMP	
G-5848	EDC/ECO PMP STG SUMP PUMP	
G-653	PROPYLENE REFRIGERATION MAKEUP PUMP	28'-8"
G-728A & B	DEHYDRATION COLUMN FEED PUMPS	28'-8"
G-711	LIGHT ENDS COLUMN FEED PUMP	28'-8"
G-712A & B	FURNACE FEED PUMPS	28'-8"
G-713	WET CRUDE EDC STORAGE TANK SUMP PUMP	28'-8"
G-728A	EDC LIGHT ENDS LOADING PUMP	28'-8"
G-728B	EDC HEAVY ENDS LOADING PUMP	28'-8"
D-583	EDC/ECO PROD STG AREA STM WTR SUMP	28'-8"

LEGEND:
SWAN STATION ⊕ S.W.A.N. STATION
EYE WASH ⊕ EMERGENCY SHOWER/EYE WASH

NOTES:
1. DELETE
2. SEE UNDERGROUND DRAWING FOR TRENCH LOCATIONS.
3. HPFS=19'-8"

COORDINATES		
	NORTH	EAST
1	N.9791.96'	E.6338.8'
2	N.9791.96'	E.6329.8'
3	N.9791.96'	E.6334.75'
4	N.9791.96'	E.6338.8'
5	N.9791.77'	E.6289.11'

4	1/28/92	ADDED MISC. PIPE SUPPTS	KAM	FT	FTR	---	BM	CB
3	12/16/91	REVISED AS NOTED	KAM	FT	FTR	---	BM	CB
2	8/28/91	REVISED AS NOTED	KAM	FT	FTR	---	BM	CB
1	7/24/90	REVISED CLOUDS & ADDED RAMP	FT	FT	[illegible]	---	[illegible]	[illegible]
0	5/1/89	ISSUED FOR CONSTRUCTION	VW	RDR	LD	LDB	LB	MAP
NO.	DATE	REVISIONS	BY	DATE	APP'D	APP'D	APP'D	APP'D

SCALE 1" = 20'-0" | DRAWN V.WATSON | CHK'D | APP'D

BECHTEL, INC.
HOUSTON

OXYMAR
CORPUS CHRISTI VCM PLANT
INGLESIDE, TEXAS

PLOT PLAN
EDC PRODUCT STORAGE - AREA 7

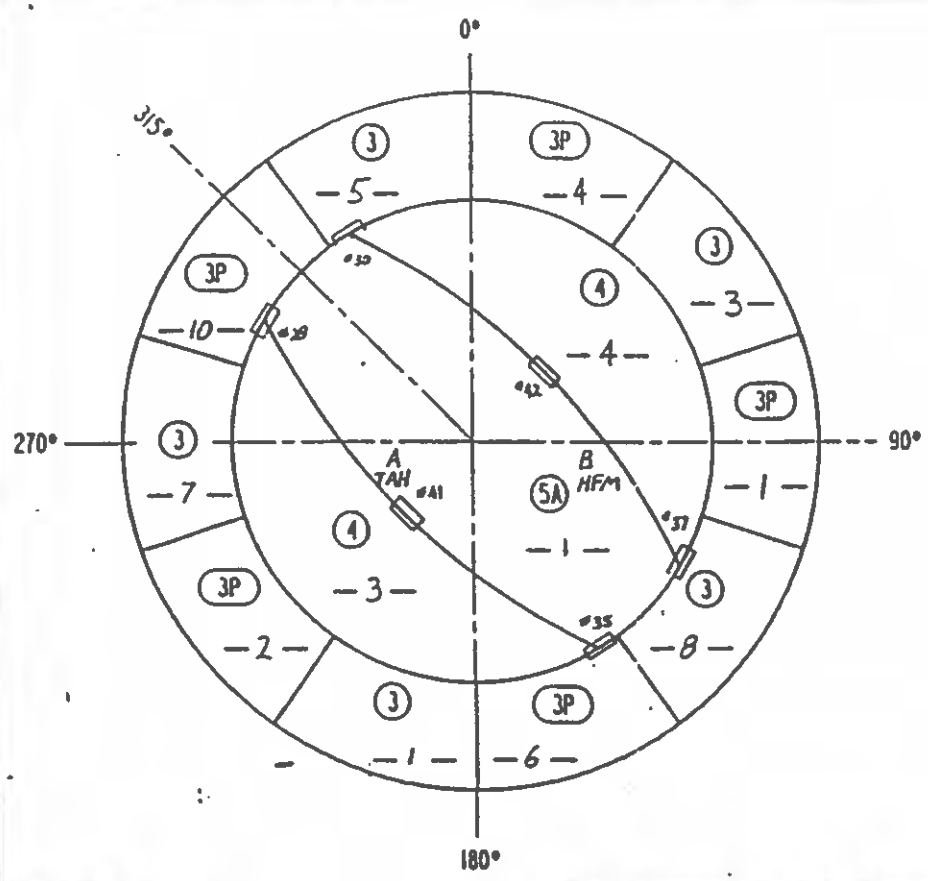
AREA OR BUILDING	TYPE	CHK'D	APP'D

JOB NO.	DRAWING NO.	REV.
19611	70-00-A-788	5

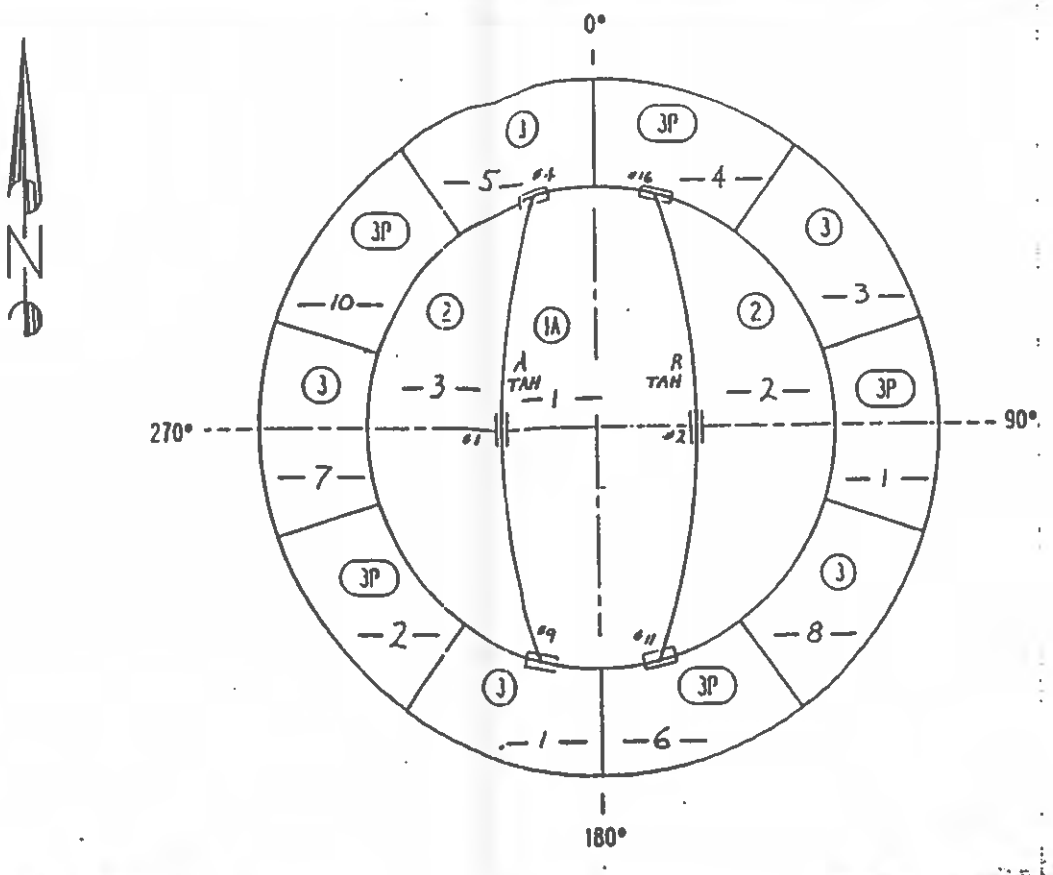
70-00-A-781	PROCESS AREA PLOT PLAN
70-00-A-900	OVERALL MASTER PLAN
REFERENCE DRAWINGS	

0' 10' 20' 40' 60'
ONE INCH = 20'-0"

CADD FILE NAME: 7088A788.DGN CDH 3/28/90 (32.0)



TOP PLAN



DOTTON HEAD PLATES
INSIDE VIEW

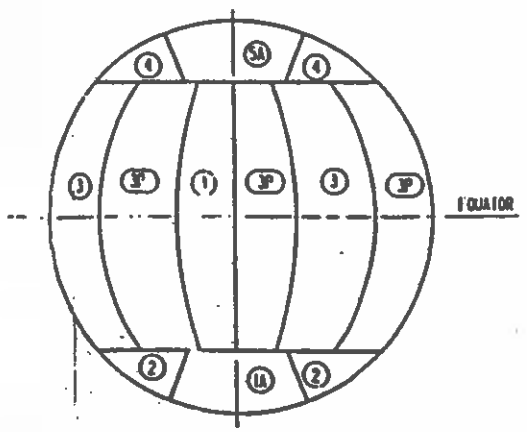
NDE-PERSONNEL MT & PT ONLY		NAME OF WELDER	I.D.
BILLY D CHILDRESS		THOMAS A HERNANDEZ	TAH
WILLIAM H SATTERSFIELD		HOWARD E MINTER	LEM
JOHN D WILLIAMS			
LIST NDE PROCEDURES USED - PT ONLY	SEAM I.D. IF REQ'D		
MT 5Y REV 1	ALL *		
MT 8 REV 2	ALL *		
LIST WELD PROCEDURE	SEAM I.D. IF REQ'D		
GWPS-SMA REV 14	ALL		
WPS E7018	ALL		

FOR AUTHORIZED INSPECTOR ONLY All Syst A.T. welds required to be
Acceptable Syst A.T. required for 12-21-00
Visual only for Hydro S.T.
12/13/00

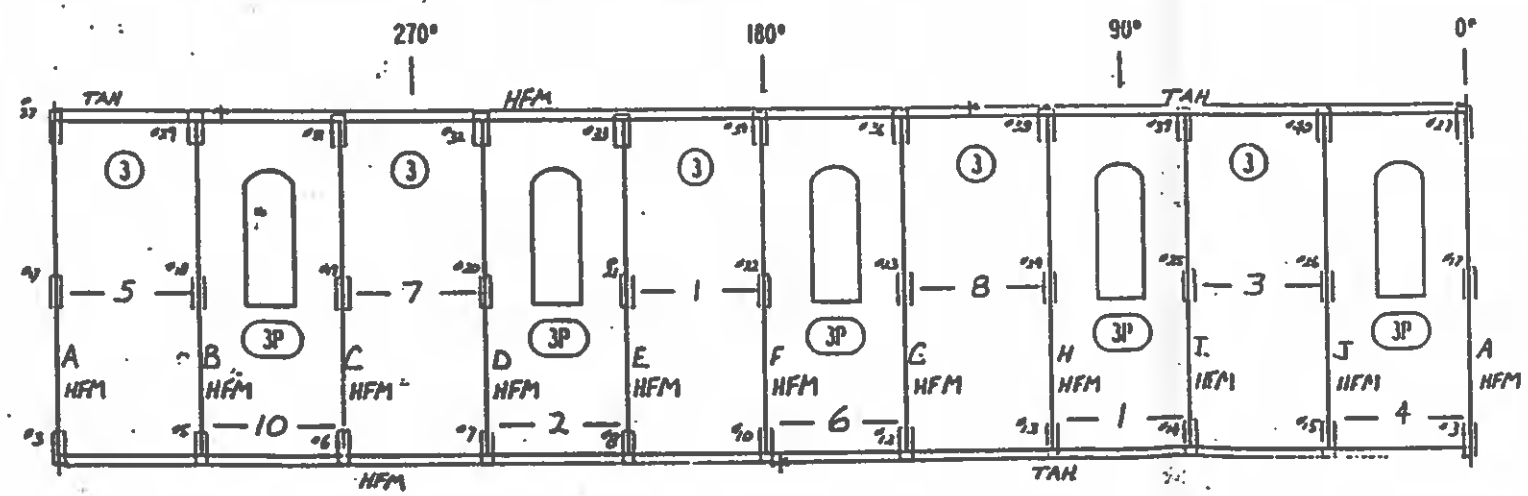
* INCLUDES BACK GOUGED SURFACES

NOTES:

1.) RECORD MATERIAL I.D. FOR EACH PIECE OR ASSEMBLY.
2.) RECORD WELDERS I.D. ON EACH SEAM.
3.) RECORD SEAM I.D. & R.T. INTERVALS (FIRST & LAST FOR 100%) OR LOCATION FOR SPOTS.



ELEVATION

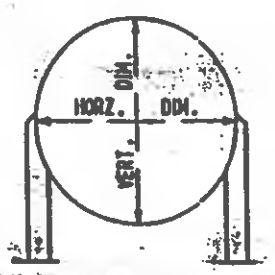


DEVELOPED ELEVATION OF EQUATOR R's

(OUTSIDE VIEW)

VESSEL DIAMETER	
VERTICAL	24'
HORIZONTAL N/S	24'
HORIZONTAL E/W	24'

RECORD VESSEL FINAL AS-BUILT DIMENSIONS



WHEN COMPLETE
FORWARD: SPEC CONSTRUCTION OFFICE ONE LEGIBLE AND WORK COPIES IF ANY
CONSTRUCTION OFFICE: KEEP ONE COPY IN CONSTRUCTION OFFICE FILE
SPEC LEGIBLE COPY TO CERTIFYING ASSOCIATE

I CERTIFY THAT THIS RECORD IS COMPLETE AND ACCURATE IN ACCORDANCE WITH SECTION 5 OF DIVISION 4 OF THE O.C. MANUAL.

John D. Williams — 5/3/01
ANTHONY G. O.A. SUPERVISOR — DATE

95150481 JDN

REVISE CHANGE FROM PREVIOUS ISSUE

CBI

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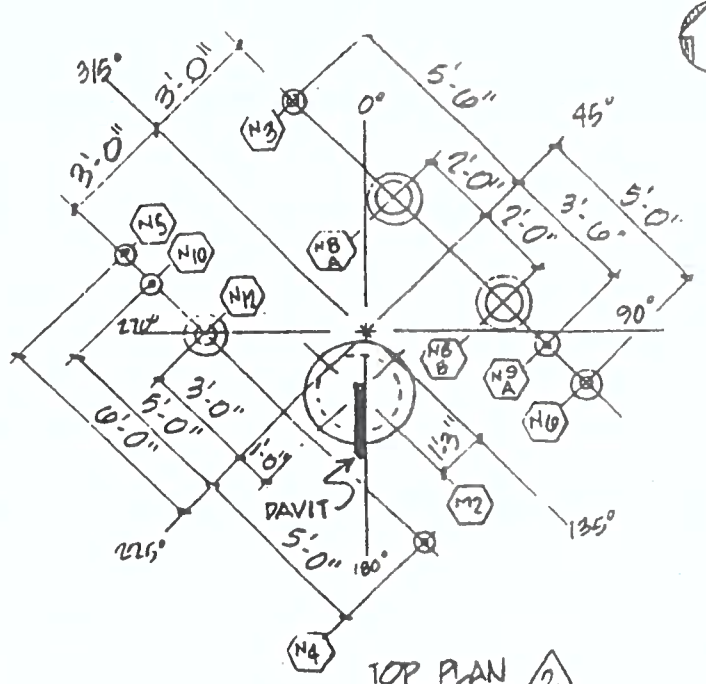
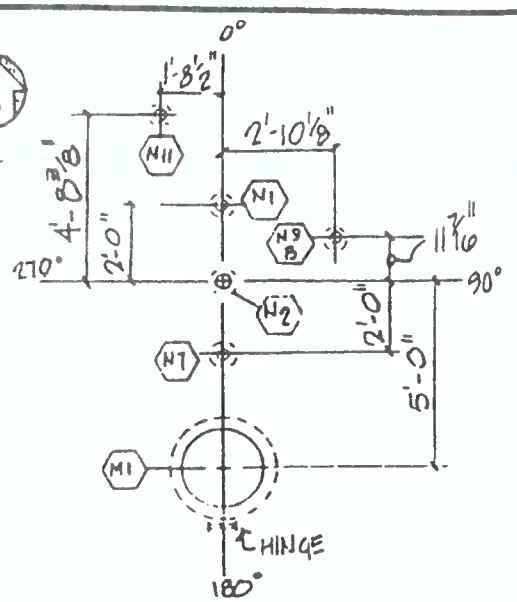
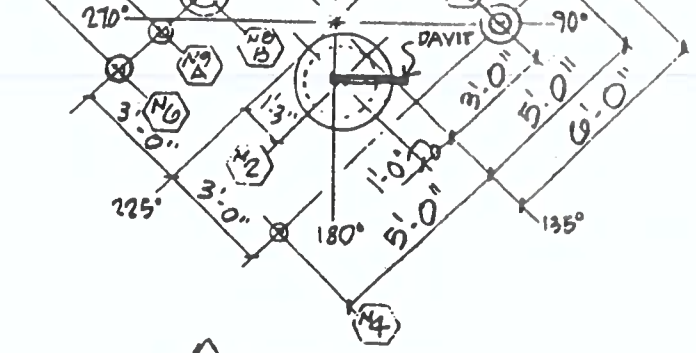


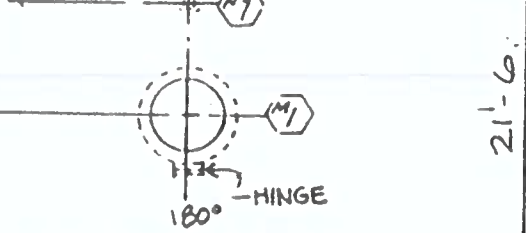
TOP PLAN (C-720A) △2



△2 BOTTOM PLAN (INSIDE VIEW) (C-720A)

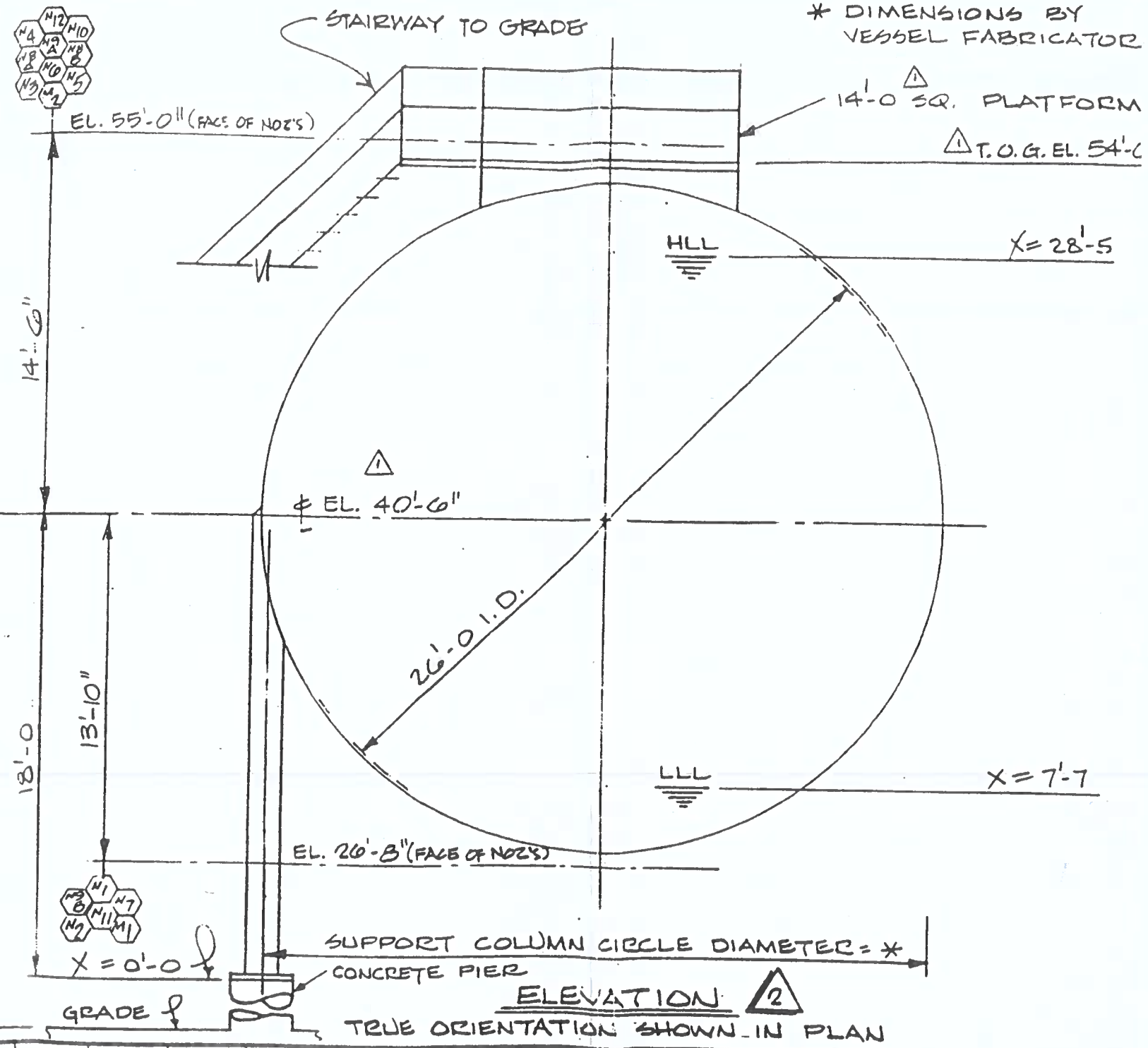


△2 TOP PLAN (C-720B)



△2 BOTTOM PLAN (INSIDE VIEW) (C-720B)

△1 EL. 19'-0" ℄



Mark	No. Req'd	Size	Class	Face	Service and Remarks
M2	1	24"	150	R.F.	MANWAY W/BLIND, STUDS, NUTS & GASKET. SEE NOTE 21.
M1	1	24"	150	R.F.	MANWAY W/BLIND, STUDS, NUTS & GASKET. SEE NOTE 21.
N12	1	6"	300	R.F.	LIT W/STILL WELL PER DWG SA-006C.
N11	1	1½"	150	R.F.	TE △1
N10	1	1½"	150	R.F.	PT △1
N9	2	3"	150	R.F.	LIT/PT △1
N8	2	10"	150	R.F.	PSV △1
N7	1	3"	150	R.F.	DRAIN
N6	1	4"	150	R.F.	VENT W/BLIND, STUDS, NUTS & GASKETS △1
N5	1	2"	150	R.F.	SPARE W/BLIND, STUDS, NUTS & GASKETS △1
N4	1	2"	150	R.F.	PROCESS VENT △1
N3	1	3"	150	R.F.	SPARE W/BLIND, STUDS, NUTS & GASKETS △1
N2	1	4"	150	R.F.	OUTLET W/VORTEX BREAKER PER STD. DWG. C-548 △1
N1	1	3"	150	R.F.	FILL △1

Nozzle, Manway, and Connection Schedule

BECHTEL, INC.
HOUSTON

OCCIDENTAL CHEMICAL CORP.
VCM PLANT
CORPUS CHRISTI, TEXAS

Service: EDC LIGHT ENDS AND EDC HEAVY ENDS/VCM TAR STORAGE TANKS
Equip. No.: C-720A/B Qty. Req'd.: TWO

Job No.	Drawing No.	Rev.
19611	DS-C-720	3

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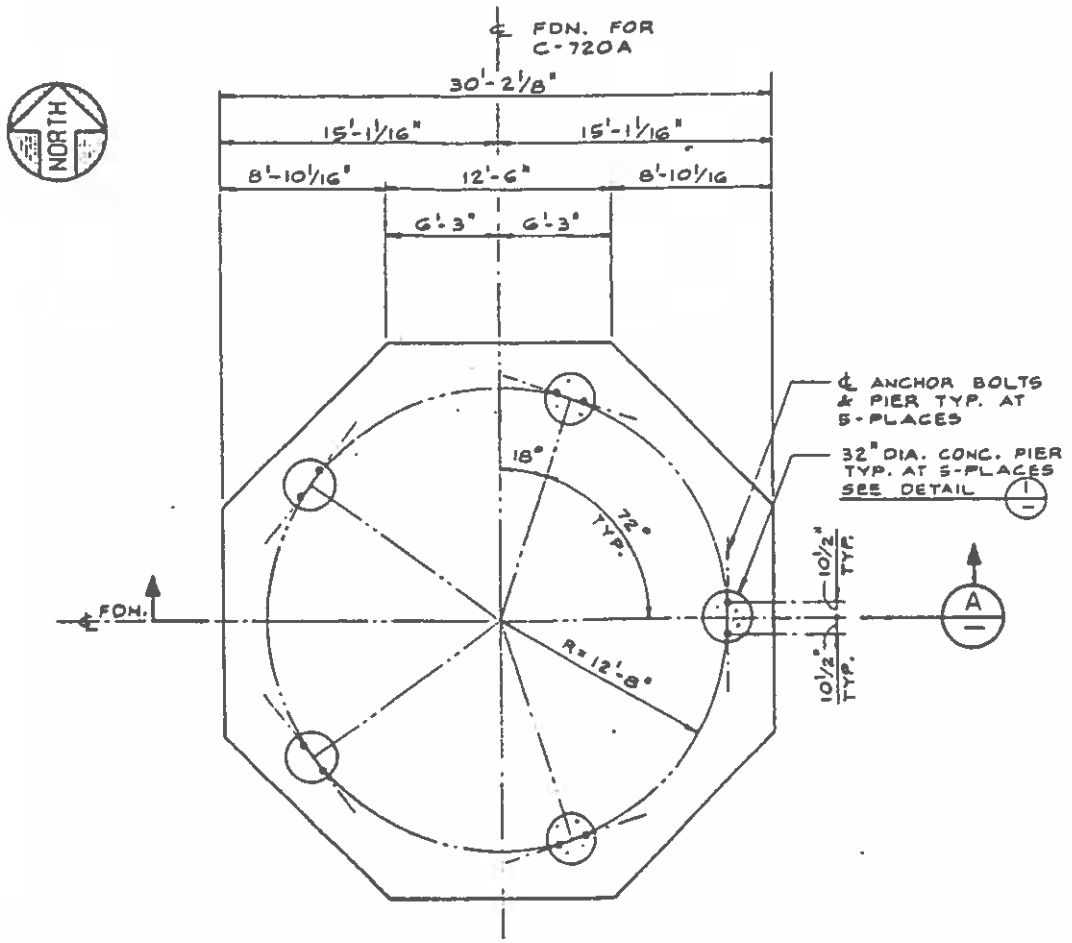
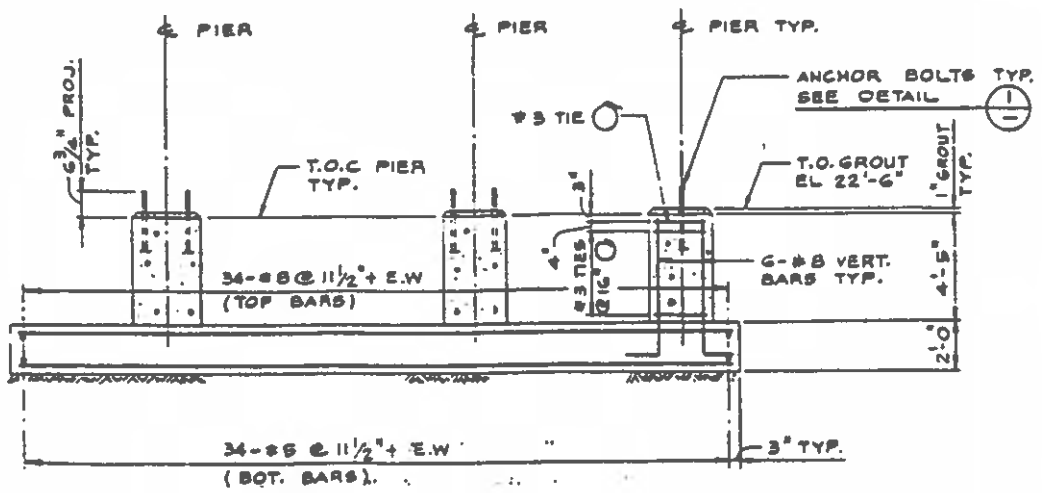
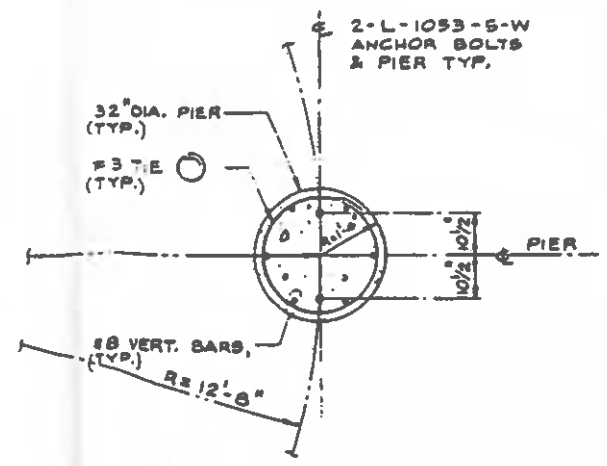


PLAN
3/16"=1'-0"



SECTION A
¼"=1'-0"



DETAIL 1
½"=1'-0"

GENERAL NOTES

1. FOR DESIGN AND CONSTRUCTION NOTES S DWG. 00-A-Q-1.
2. FOR LOCATION SEE PLOT PLAN DWG. 7D-00A-700.

REFERENCE DRAWINGS

PLOT PLAN	7D-00A-70
DESIGN & CONSTRUCTION NOTES	00-A-Q-1
ANCHOR BOLTS	00-D-Q-51

NO.	DATE	REVISIONS	BY	CHK'D	ENGR'G APPR'D	MGR'S APPR'D
0	12/8/89	ISSUED FOR CONSTRUCTION				

SCALE AS SHOWN | DESIGNED P. MEIER | DRAWN R. SANTOS

BECHTEL, INC.
HOUSTON

OXYMAR
VINYL CHLORIDE MONOMER PLANT
CORPUS CHRISTI, TEXAS

FOUNDATION FOR C-720A

AREA DESIGNATION	TYPE	EWR NUMBER	AFE NUMBER

JOB NO.	DRAWING NO.
19611	7D-80-Q-007

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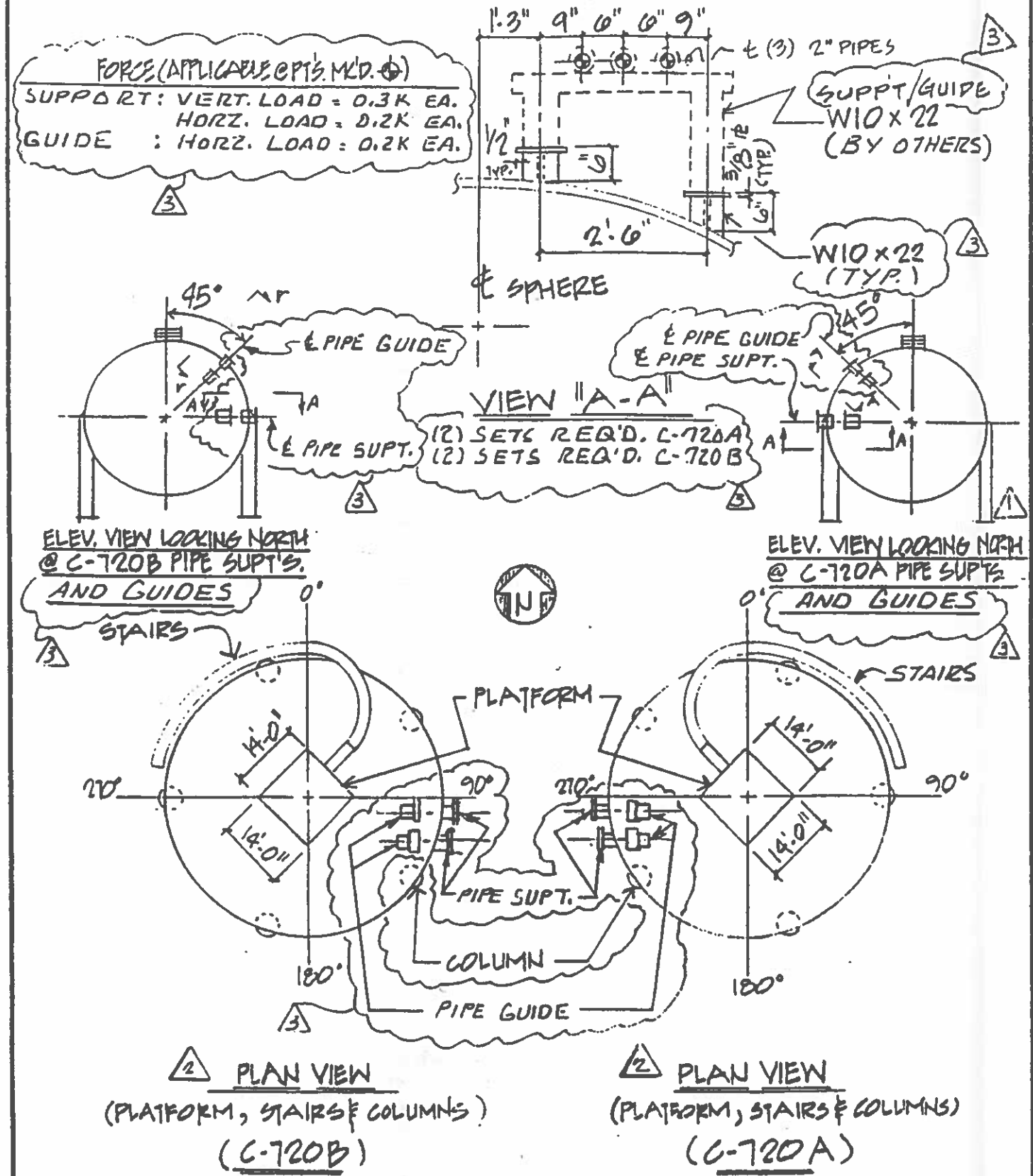
DESIGN REQUIREMENTS -con't-

24. PROVIDE GROUNDING LUGS PER DWG. C-508.
25. STUDS & NUTS TO BE FLUOROCARBON COATED BY STAND-COTE (SC-1) OR LONE STAR SCREW (PCI-3).



2 PLAN VIEW (PLATFORM, STAIRS & COLUMNS) (C-720B)

2 PLAN VIEW (PLATFORM, STAIRS & COLUMNS) (C-720A)

DESIGN REQUIREMENTS

1. ASME Code Section VIII, Division 1, 1986 Edition and Current Addenda.
2. Code Stamp and National Board Registration are Required.
3. Project Spec's.: 19611-A-001, A-002, A-006, A-009, C-002, C-004, W-001, C-509, N-003, X-002, X-004, X-005
4. Material (ASME): Plate SA-516-70 Forging SA-105 Pipe SA-106-B Studs SA-193-B7 Nuts SA-194-2H ‡ Gasket 1/16" GARLOCK 8748 ‡ SEE NOTE 25.
5. Pressure @ Temperature:

	VESSEL				JACKET			
Internal Design:	15	PSIG @	200	°F	N/A	PSIG @	N/A	
External Design:	N/A	PSI @	N/A	°F	N/A	PSI @	N/A	
Normal Operating:	10	PSIG @	170	°F	N/A	PSIG @	N/A	

6. Minimum Design Metal Temperature 20 °F @ 15 PSIG
7. Corrosion Allowance:

	VESSEL		JACKET	
Pressure Parts:	1/8	Inches	N/A	Inche
Internals (removable):	NONE	Inches	N/A	Inche
Internals (fixed):	NONE	(Total) Inches	N/A	(Total) Inche

8. Process Fluid: S.G. 1.30 Contaminants NONE
9. Service: Lethal NO Cyclic NO
10. RT Per Code & Specs, SPOT Minimum. PWHT Per Code & Spec's
11. NDE (UT, MT, PT) Per Code & Spec's Impact Testing Per Code & Spec's
12. Site Design: Wind Per SPEC. A-002 Seismic NOT REQ'D. FOR THIS PROJECT
13. Surface Prep and Paint: Exterior REQ'D Per Spec X-002 & X-004 Interior SANDBLAST SSPC-SP
14. Insulation: NONE Per Spec N/A (By Others), Supports NONE Per N/A
15. Fireproofing: LEGS Per Spec N-003 (By Others), Supports REQ'D Per Dwg. B-N-501
16. Removable Internals: NONE
17. Weights: Vessel (empty) * + Removable Internals * = Operating (NLL) * Test (Full) * * = By Seller
18. Bolt Holes Straddle Vessel ℄'s.
19. Tray Elevations are to Top of Tray Support.
20. Fabrication Details Per Std. Dwg's. on C-500 Index.
21. Manway Covers Shall be Provided with Hinges and Handle Per Std. Dwg. C-537.
22. Nozzle Projections from Inside of Shell to Flange Face Shall be 8" for Size 3" and Less and 10" for Size 4" and Greater unless specified otherwise on the Data Sheet.
23. STAIRWAY, PLATFORM, & HANDRAIL SHALL BE GALVANIZED PER SPEC X-00

No.	Date	Description	By	CK	Mech	Proc Engr	Piping Engr	Oxy
3	12/14/89	REV. AS NOTED ISSUED FOR CONST.	JD	HN/AM 12/13				
2	10/25/89	ISSUED FOR CONST						
1	7/3/89	REVISED NOTE 12, NOZZLE SCH & ELEV. AS NOTED	RD					
0	3/17/89	ISSUED FOR SUB-CONTRACT						

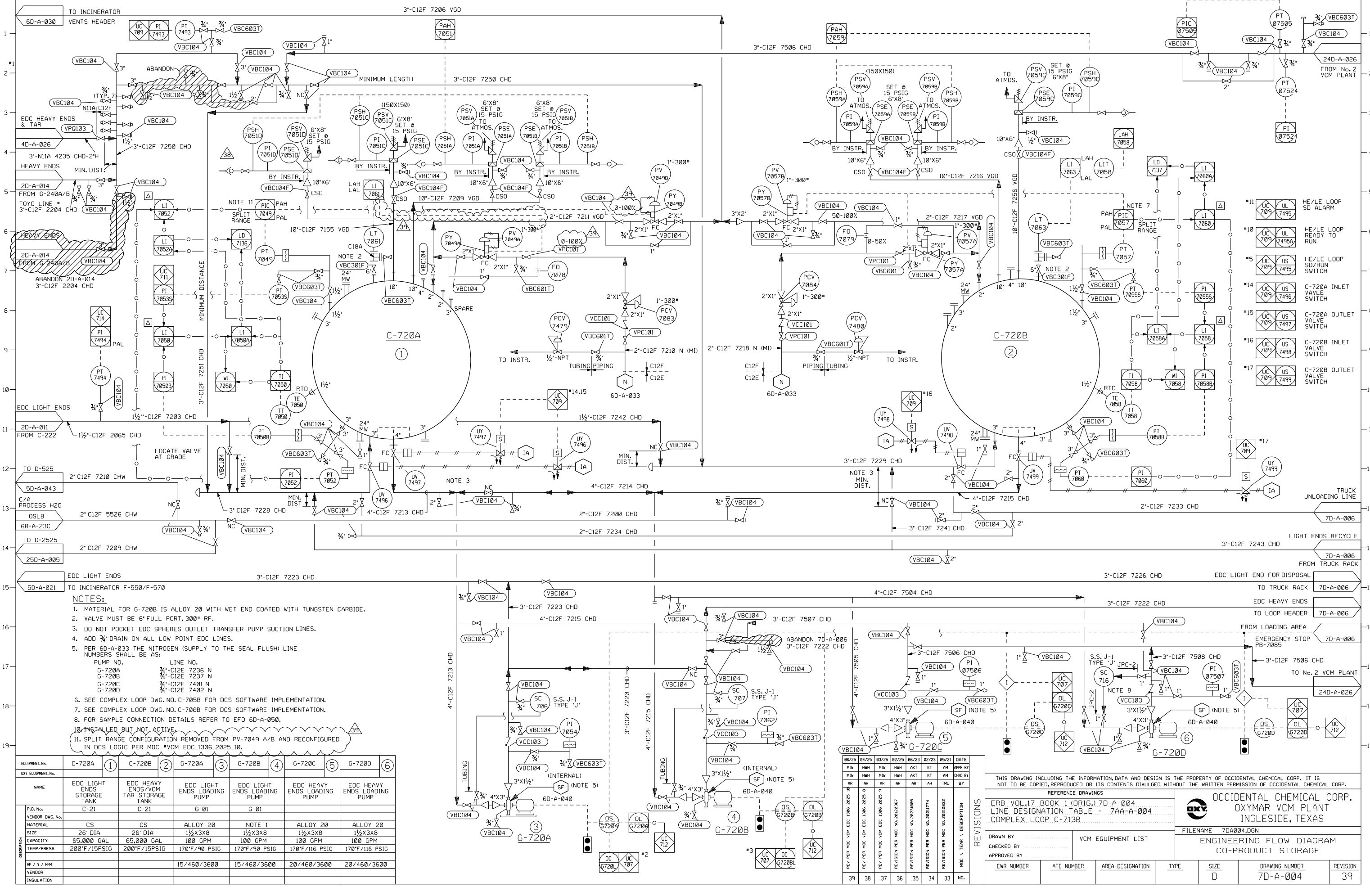
Revisions

BECHTEL, INC.
HOUSTON

OCCIDENTAL CHEMICAL CORP
VCM PLANT
CORPUS CHRISTI, TEXAS

Service: EDC LIGHT ENDS AND EDC HEAVY ENDS/VCM TAR STORAGE TANKS
Equip. No.: C-720A/B Qty. Req'd.: TWO

Job No.	Drawing No.
19611	DS-C-720


TO INCINERATOR VENTS HEADER 6D-A-030
3"-C12F 7206 VGD
3"-C12F 7506 CHD
3"-C12F 7250 CHD
3"-C12F 7251 CHD
3"-C12F 7203 CHD
3"-C12F 7223 CHD
3"-C12F 7226 CHD
3"-C12F 7228 CHD
3"-C12F 7241 CHD
3"-C12F 7243 CHD
3"-C12F 7507 CHD
3"-C12F 7506 CHD
3"-C12F 7508 CHD
10"-C12F 7209 VGD
10"-C12F 7155 VGD
10"-C12F 7216 VGD
10"-C12F 7256 VGD
2"-C12F 7211 VGD
2"-C12F 7217 VGD
2"-C12F 7218 N (MI)
2"-C12F 7210 N (MI)
1½"-C12F 7242 CHD
4"-C12F 7214 CHD
4"-C12F 7213 CHD
4"-C12F 7200 CHD
4"-C12F 7215 CHD
4"-C12F 7504 CHD
4"-C12F 7505 CHD
3"-C12F 7229 CHD
3"-C12F 7233 CHD
3"-C12F 7234 CHD
3"-C12F 7222 CHD
3"-C12F 7223 CHD
3"-C12F 7220 CHD
3"-C12F 7215 CHD
3"-C12F 7213 CHD
3"-C12F 7207 CHD
3"-C12F 7222 CHD
3"-C12F 7226 CHD
3"-C12F 7506 CHD
3"-C12F 7508 CHD
C-720A
C-720B
G-720A
G-720B
G-720C
G-720D
ABANDON 2D-A-014 3"-C12F 2204 CHD
ABANDON 7D-A-006 3"-C12F 7222 CHD
EDC HEAVY ENDS & TAR
4D-A-026
3"-N11A 4235 CHD-2"H
HEAVY ENDS
2D-A-014
FROM G-240A/B
TOYO LINE # 3"-C12F 2204 CHD
EDC LIGHT ENDS
2D-A-011
FROM C-222
1½"-C12F 2065 CHD
TO D-525
5D-A-043
2" C12F 7210 CHW
C/A PROCESS H2O
OSLB
6R-A-23C
2" C12F 5526 CHW
TO D-2525
25D-A-005
2" C12F 7209 CHW
EDC LIGHT ENDS
5D-A-021
TO INCINERATOR F-550/F-570
24D-A-026
FROM No. 2 VCM PLANT
TRUCK UNLOADING LINE
7D-A-006
LIGHT ENDS RECYCLE
FROM TRUCK RACK
EDC LIGHT END FOR DISPOSAL
TO TRUCK RACK 7D-A-006
EDC HEAVY ENDS
TO LOOP HEADER 7D-A-006
FROM LOADING AREA
EMERGENCY STOP PB-7085
TO No. 2 VCM PLANT
LOCATE VALVE AT GRADE
MINIMUM LENGTH
MINIMUM DISTANCE
MIN. DIST.
BY INSTR.
TO INSTR.
TUBING PIPING
PIPING TUBING
SPARE
ABANDON
NOTE 2
NOTE 3
NOTE 7
NOTE 8
SPLIT RANGE
(INTERNAL)
(NOTE 5)
(150X150)
6"X8" SET @ 15 PSIG
TO ATMOS.
10"X6" CSO
VBC104
VBC104F
VBC603T
VBC601T
VBC301F
VPC101
VCC101
VCC103
6D-A-040
6D-A-033
S.S. J-1 TYPE 'J'
JPC-2
24" MW
NC
RTD
PAL
PAH
LAH
LAL
FC
SF
OS
OL
UC
IA
S
TE
TT
TI
WI
LI
LIT
LD
LAH
PT
PI
PIC
PSV
PSH
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PV
PCV
FO
SC
UY
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UL
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LT
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7058A
7058B
7060A
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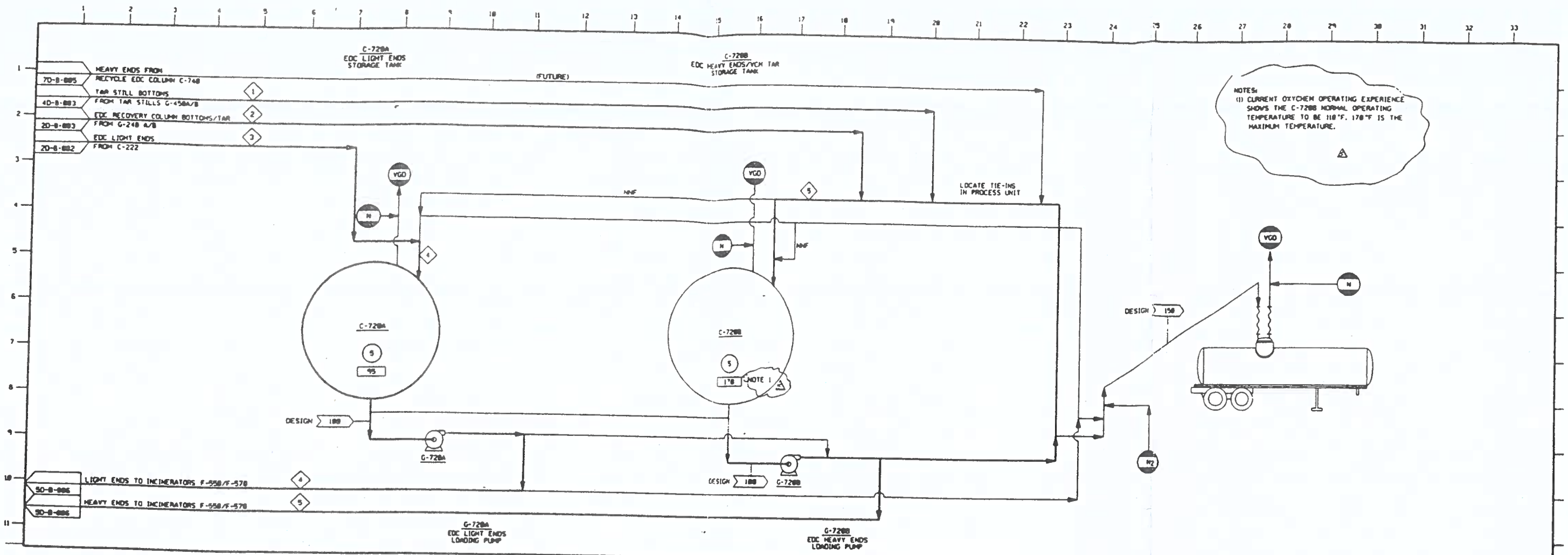

MATERIAL	MOL. WT.	FLOW, LBS/HR 1	2	3	4	5
EDC	98.96	186	257.38	1426.63	1426.63	363.3
$C_2H_2Cl_4$	167.85	339.7	181.78			441.46
$C_4H_6Cl_2$	127.82	194.8	395.86			589.86
$C_4H_5Cl_3$	159.44	66.3				66.3
HCl	36.46			2.11	2.11	
C_2H_4	28.86			6.56	6.56	
C_2H_3Cl	64.5			29.94	29.94	
C_4H_6Cl	88.54			398.16	398.16	
C_2HCl_3	131.4			1.45	1.45	
$C_2H_2Cl_2$ - TRANS	96.94			22.49	22.49	
$CHCl_2OH_3$	98.96			85.64	85.64	
$CHCl_3$	119.4			428.38	428.38	
CCl_2OH_3	133.4		319.68	19.35	19.35	319.68
CCl_2OH_2	98.94			9.58	9.58	
$C_2H_2Cl_2$ - CIS	96.94			29.66	29.66	
CCl_4	153.8			26.92	26.92	
C_2Cl_4	165.82		35.49			35.49
$CHCl_2OH_2Cl$	133.4					
$C_2H_2Cl_4$	167.85					
CH_2ClCH_2OH	80.52		5.48			5.48
TEMPERATURE °F		275	190	95	95	170
PRESSURE - PSIA						
DENSITY - LBS./CU.FT.		91.184	75.1	74.92	74.92	
VISCOSITY - C.P.		1	0.9	0.995	0.994	
AVER.MOL.WT.		148.14	123.51	99.12	99.12	129.74
FLOW - GPM		1	2	4	4	
SCFM 60°F & 1 ATMOS						
ACFM						
TOTAL LB/HR		786	1115.49	2486.79	2486.79	1821.49

HEAT EXCHANGER
THEO.DUTY - BTU/HR.
DESIGN DUTY
M.T.D. = °F.
AREA = $FT.^2$
U BTU/HR. - $FT.^2$-°F.
U BTU/HR. - $FT.^2$-°F.
FOULING FACTOR

LEGEND
- STREAM NUMBER
- GPM
- POUNDS/HR.
- SCFM
- TEMPERATURE °F
- PSIG

MATERIAL BALANCE FIGURES IN ____ PER ____ WITH DESIGN CAPACITY OF ____ / ____ AT ____ HOURS/ ____

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NO.	REVISIONS	DRAWN	CHECK.	APP.	DATE
5	REVISED AS CLOUDED	MM	PG		10-12-88
4	1.1 BILLION LB/YR DESIGN BASIS	MM	PG	DRDB	9/5/89
3	FOR DESIGN		PG	JCB	01/25/89
2	FOR ESTIMATE		PG	BB	11/11/88
1	ISSUE FOR OXY CONCEPT APPROVAL	B.B.		S.S.	

DRAWN BY BABEEBE DATE 8-22-88
PROCESS ENGR. ____
PROCESS ENGR. ____
PROJECT APP. ____

OXYMAR
CORPUS CHRISTI VCM PLANT
INGLESIDE, TEXAS

BECHTEL JOB NO. 19611 | DWG 70-8-003 SHT.

SCALE NONE

VCM PLANT PROCESS FLOW DIAGRAM
CO-PRODUCT STORAGE

REV. 5

08337GDGALP19 (1881.42)
DATE 10-10-88

Appendix B

Integrity Assessment Report

OCCIDENTAL CHEMICAL CORPORATION
OCCIDENTAL CHEMICAL INGLESIDE, TEXAS PLANT
ASSESSMENT AND CERTIFICATION
OF NEW HAZARDOUS WASTE TANKS
C-720A AND C-720B

MARCH, 1991

DC910019
JN04049402

JONES AND NEUSE, INC.
Environmental Engineering Consultants

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and
Occidental Chemical Corporation

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2.0 ASSESSMENT METHODOLOGY	2
2.1 DESIGN STANDARDS	
2.2 WASTE CHARACTERISTICS	
2.3 CORROSION PROTECTION	
2.4 DOCUMENTED AGE	
2.5 TANK FOUNDATION	
2.6 SECONDARY CONTAINMENT	
3.0 INSPECTION	4
3.1 GENERAL	
3.2 INSPECTION	
3.3 TIGHTNESS TESTING	
4.0 CERTIFICATION	6

APPENDICES

A MANUFACTURER'S CERTIFICATION AND TANK DRAWINGS
B SECONDARY CONTAINMENT CALCULATIONS
C TIGHTNESS TESTING RESULTS

SECTION 1.0
INTRODUCTION

1.0 INTRODUCTION

EPA regulations published in July, 1986 state that owners or operators of new tank systems or components must obtain and submit the Regional Administration at time of submittal of Part B information, a written assessment, reviewed and certified by an independent, qualified, registered, professional engineer, attesting that the tank system has sufficient structural integrity and is acceptable for the storing and treating of hazardous wastes. Specifically, 40 CFR 264.192 delineates the considerations for attesting to the tank system's integrity. In general, this regulation requires the assessment to show that the foundation, structural support, seams, connections, and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength, compatibility with the wastes, to be stored or treated, and corrosion protection to insure that it will not collapse, rupture, or fail.

Accordingly, Jones and Neuse, Inc. (JN) conducted the tank assessment described herein for the new hazardous waste tanks to be placed in service at the OxyChem Facility located in Ingleside, Texas. The tanks are to be used for collecting and storing hazardous wastes prior to treatment or off-site disposal.

SECTION 2.0
ASSESSMENT METHODOLOGY

2.0 ASSESSMENT METHODOLOGY

2.1 Design Standards

The new hazardous waste tanks (C-720A and C-720B) are elevated 26-foot inside diameter welded steel spheres with capacities of 65,000 gallons each. The wall thicknesses range from 0.366 to 0.551 inches with a design corrosion allowance of 0.125 inches. The shell material is SA516-70. The tanks are pressure vessels with a design pressure of 15 psi at 200°F. Each tank is supported with five legs (15.5 ID steel columns) welded at the equator and secured with anchor belts to concrete support pads.

Both tanks were designed and constructed in accordance with ASME Rules Section VIII Division 1 1986 Edition (1987 Addendum). The manufacturer's certifications are included as Appendix A of this report. Tank drawings are also included in Attachment A.

2.2 Waste Characteristics

The wastes to be stored in the new tanks are ethylene dichloride (EDC) heavy ends (K019) and vinyl chloride monomer heavy ends (K020). The wastes are considered compatible with steel.

2.3 Corrosion Protection

The new tanks are elevated, therefore, the provisions of 40 CFR 264.192 (a) (3) and (4) do not apply. All exterior surfaces including the support system have been painted with epoxy primer and a polyurethane finish coat.

2.4 Documented Age

According to the manufacturer's certification, both tanks were constructed in May of 1990.

2.5 Tank Foundation

The foundation system is presented in Bechtel Drawing No. 7D 80-Q-007. The foundation system is adequate to maintain the load of the tank when full.

2.6 Secondary Containment

40 CFR 264.193 presents the requirements for secondary containment for new tank systems. The following information is applicable to the secondary containment requirements of the regulations.

- The impoundment dike is designed to contain 100% of the capacity of the largest tank. In addition, the dike has sufficient capacity to contain precipitation from a 25 yr. - 24 hr. rainfall event (8.8") (see Appendix B for calculations).

- Chemically resistant water stops were used at all construction joints.

- The impoundment has been provided with an impermeable interior coating that will prevent migration of waste into the concrete in the event there is a spill or release.

- The bottom slab of the impoundment is sloped to drain to facilitate removal of liquids resulting from leaks, spills, or precipitation.

- It is Jones and Neuse, Inc.'s understanding that OxyChem will inspect the system daily for the presence of any release of hazardous waste or accumulated liquid.

SECTION 3.0
INSPECTION

3.0 INSPECTION

3.1 General

EPA regulations (40CFR 264.192(b)) require that in order to ensure proper handling procedures are adhered to during installation, prior to covering, enclosing, or placing a new tank system or component in use, an independent, qualified, registered professional engineer must inspect the system for the presence of any of the following:

- weld breaks
- punctures
- scrapes of protective coatings
- cracks
- corrosion
- other structural damage or inadequate construction/ installation

In addition, 40 CRF 264.192 (d) requires that all new tanks and ancillary equipment be tested for tightness prior to being covered, enclosed, or placed in use.

3.2 Inspection

On January 4, 1991 Mr. Don Nelson of JN inspected the tank systems as required by the regulations. All components of the tank systems were in good condition with no cracks, corrosion, punctures, scrapes of protective coating or other damage.

At the time of this inspection, the impermeable coating had not been applied to the secondary containment structure. On February 15, 1991 the secondary containment system was inspected. The impermeable coating had been applied however, small holes in the protective coating were noted at construction joints at four locations.

On March 27, 1991 the repairs to the protective coating were inspected. The areas had been repaired satisfactorily.

3.3 Tightness Testing

As required by 40 CFR 264.192 (b) the tank systems were pressure tested for tightness prior to being placed in service. The testing indicated the systems are tight. The results are included as Attachment C.

SECTION 4.0
CERTIFICATION

4.0 CERTIFICATION

Based upon the assessment methodology described herein (JN Document DC910019) and subject to limitations of that methodology I have determined that:

1. The tank systems referred to as Hazardous Waste Tanks C-720A and C-720B located at the Occidental Chemical Corporation facility in Ingleside, Texas are not subject to cracks, leaks, or corrosion that affect the performance of the tanks, are not leaking or unfit for use, and

2. The tank systems are adequately designed and have sufficient structural strength and compatibility with the stored wastes to ensure that they will not collapse, rupture, or fail.

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 persons or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to be the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Donald W. Nelson

Donald W. Nelson, P.E.

APPENDIX A
MANUFACTURE'S CERTIFICATION
AND
TANK DRAWINGS

FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS

As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

MADE: JJJ 2/20/90
CHKD: MC 3/28/90

1. ...ufactured and certified by CBI Na-Con, Inc.; 8900 Fairbanks N. Houston Rd.; Houston, TX Contract S90515-4
(Name and address of manufacturer)

2. ...manufactured for Bechtel Corporation; Houston, TX Vessel #C-720A
(Name and address of purchaser)

3. Location of installation Occidental Chemical Corp.; Oxychem VCM Plant; Corpus Christi, TX
(Name and address)

4. Type Sphere | S90515-4-1 (Major's serial no.) | ------- (CRN) | 1 (Rev 0) (Drawing) | 106 (Nat'l. Bd. no.) | 1990 (Year built)
(Horiz. or vert., tank)

5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME Boiler and Pressure Vessel Code. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 1986 Ed.
Year

1987 (Addenda date) | ---------- (Code Case no.) | ---------- (Special service per UG-120(e))

...ms 6-11 incl. to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers

6. Shell: SA516-70 (Matl. [Spec. No., Grade]) | 0.366-0.551 (Nom. Thk. [in.]) | 0.125 (Corr. Allow. [in.]) | 26'-0 (Diam. I.D. [ft & in.]) | ---------- (Length [Overall] [ft & in.])

7. Seams: Double Butt Welded (Long. [Dbl., Sngl.]) | Spot (RT 3) (R.T. [Spot or Full]) | E5 (Eff. [%]) | ---------- (H.T. Temp. [°F])

---------- (Type) | ---------- (Girth [Dbl., Sngl.]) | ---------- (R.T. [Spot, Partial, or Full]) | ---------- (No. of Courses)

8. Heads: (a) Matl. ---------- (Spec. No., Grade) (b) Matl. ---------- (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------
	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------

...movable, bolts used (describe other fastenings) ----------
(Matl., Spec. No., Gr., Size, No.)

9. Type of Jacket ---------- Proof Test ----------

10. Jacket Closure ---------- If bar, give dimensions ---------- If bolted, describe or sketch.
(Describe as welded, bar, etc.)

11. MAWP 15 psi at max. temp. 200 °F. Min. design metal temp. 20 °F at 15 psi.
Hydro., Field test press. 23.0 psig @ Top.

...ms 12 and 13 to be completed for tube sections

12. Tubesheets: ---------- (Stationary Matl. [Spec. No., Gr.]) | ---------- (Diam. [in.] [Subject to pressure]) | ---------- (Nom. Thk. [in.]) | ---------- (Corr. Allow. [in.]) | ---------- (Attach. [Welded, Bolted])

---------- (Floating Matl. [Spec. No., Gr.]) | ---------- (Diam. [in.]) | ---------- (Nom. Thk. [in.]) | ---------- (Corr. Allow. [in.]) | ---------- (Attach.)

13. Tubes: ---------- (Matl. [Spec. No., Gr.]) | ---------- (O.D. [in.]) | ---------- (Nom. Thk. [in. or Gauge]) | ------- (Number) | ---------- (Type [Straight or "U"])

...ms 14-17 incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers

14. Shell: ---------- (Matl. [Spec. No., Grade]) | ---------- (Nom. Thk. [in.]) | ---------- (Corr. Allow. [in.]) | ---------- (Diam. I.D. [ft & in.]) | ---------- (Length [Overall] [ft & in.])

15. Seams: ---------- (Long. [Dbl., Sngl.]) | ---------- (R.T. [Spot or Full]) | ---------- (Eff. [%]) | ---------- (H.T. Temp. [°F])

---------- (Type) | ---------- (Girth [Dbl., Sngl.]) | ---------- (R.T. [Spot, Partial, or Full]) | ---------- (No. of Courses)

16. Heads: (a) Matl. ---------- (Spec. No., Grade) (b) Matl. ---------- (Spec. No., Grade)

	...tion (Top, ...om, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------
	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------

If removable, bolts used (describe other fastenings) ----------
(Matl., Spec. No., Gr., Size, No.)

17. MAWP ---------- psi at max. temp. ---------- °F. Min. design metal temp. ---------- °F at ------ psi.
Hydro., pneu., or comb. test press. ----------

FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS

As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

MADE: JJJ 2/20/90
CHKD: MC 3/28/90

1. Manufactured and certified by CBI Na-Con, Inc.; 8900 Fairbanks N. Houston Rd.; Houston, TX (Name and address of manufacturer) Contract S90515-4

2. Manufactured for Bechtel Corporation; Houston, TX (Name and address of purchaser) Vessel #C-720B

3. Location of installation Occidental Chemical Corp.; Oxychem VCM Plant; Corpus Christi, TX (Name and address)

4. Type Sphere (Horiz. or vert., cone) | S90515-4-2 (Builder's serial No.) | --- (CRN) | 1(Rev 0) (Drawing) | 107 (Nat'l. Bd. No.) | 1990 (Year built)

5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME Boiler and Pressure Vessel Code. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 1986 Ed. (Year)

1987 (Addenda date) | --- (Code Case No.) | --- (Special service per UG-120(d))

Items 6-11 incl. to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers

6. Shell: SA516-70 (Matl. Spec. No., Grade) | 0.366-0.551 (Nom. Thk., in.) | 0.125 (Corr. Allow., in.) | 26'-0 (Diam. I.D. (ft & in.)) | --- (Length (Overall) (ft & in.))

7. Seams: Double Butt Welded (Long. (Dbl., Sgl.)) | Spot (RT 3) (R.T. (Spot or Full)) | 85 (Eff. (%)) | --- (H.T. Temp. (°F))

--- (Type) | --- (Circ. (Dbl., Sgl.)) | --- (R.T. (Spot, Panel, or Full)) | --- (No. of Courses)

8. Heads: (a) Matl. --- (Spec. No., Grade) (b) Matl. --- (Spec. No., Grade)

Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---

If removable, bolts used (describe other fastenings) --- (Matl., Spec. No., Gr., Size, No.)

9. Type of Jacket --- Proof Test ---

10. Jacket Closure --- (Describe as ogee & weld, bar, etc.) If bar, give dimensions --- If bolted, describe or sketch.

11. MAWP 15 psi at max. temp. 200 °F. Min. design metal temp. 20 °F at 15 psi.
Hydro.. Field test press. 23.0 psig @ Top.

Items 12 and 13 to be completed for tube sections

12. Tubesheets: --- (Stationary Matl. (Spec. No., Gr.)) | --- (Diam. (in.) (Subject to pressure)) | --- (Nom. Thk. (in.)) | --- (Corr. Allow. (in.)) | --- (Attach. (Welded, Bolted))

--- (Floating Matl. (Spec. No., Gr.)) | --- (Diam. (in.)) | --- (Nom. Thk. (in.)) | --- (Corr. Allow. (in.)) | --- (Attach)

13. Tubes: --- (Matl. (Spec. No., Gr.)) | --- (O.D. (in.)) | --- (Nom. Thk. (in. or Gauge)) | --- (Number) | --- (Type (Straight or "U"))

Items 14-17 incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers

14. Shell: --- (Matl. (Spec. No., Grade)) | --- (Nom. Thk. (in.)) | --- (Corr. Allow. (in.)) | --- (Diam I.D. (ft & in.)) | --- (Length (Overall) (ft & in.))

15. Seams: --- (Long. (Dbl., Sgl.)) | --- (R.T. (Spot or Full)) | --- (Eff. (%)) | --- (H.T. Temp. (°F))

--- (Type) | --- (Circ. (Dbl., Sgl.)) | --- (R.T. (Spot, Panel, or Full)) | --- (No. of Courses)

16. Heads: (a) Matl. --- (Spec. No., Grade) (b) Matl. --- (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	---	---	---	---	---	---	---	---	---	---
(b)	---	---	---	---	---	---	---	---	---	---

If removable, bolts used (describe other fastenings) --- (Matl., Spec. No., Gr., Size, No.)

--- --- --- --

Form U-1 (Back)

Nozzles, Inspection and Safety Valve Openings:

Mark (Nozzles, Manh., etc.)	No.	Diam. or Size	Type	Matl.	Nom. Thk.	Reinforcement Matl.	How Attached	Location
SEE ATTACHED SUPPLEMENTARY SHEET "FORM-U4" FOR SHOP INSTALLED NOZZLES.								

19. Supports: Skirt No (Yes or No) Lugs --- (No.) Legs 5 (No.) Other 15" ID Columns (Describe) Attached Welded @ Equator (Where and How)

20. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: Design Vacuum: 0.25 PSIG Product: EDC Ends/VCM Tar @ 81 12 prf (Name of part, item number, mfg's name and identifying stamp)

Head plates with nozzles attached to be shop PWHT per Manufacturer's requirements.

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1.

"U" Certificate of Authorization No. 20,126 expires April 20, 1993 FAD 5-22-90

Date 5-4-90 Co. name CBI Na-Con, Inc. (Manufacturer) Signed Mark Wood (Representative)

CERTIFICATE OF SHOP INSPECTION

Vessel constructed by CBI Na-Con, Inc. at Houston, Texas

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of TEXAS and employed by H.S.B.I. & I. Co. of Hartford, Connecticut have inspected the pressure vessel described in this Manufacturer's Data Report on 5-4, 1990, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in the Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 5-4-90 Signed P.L. Hunter (Authorized Inspector) Commissions NB-6954- TEXAS (Nat'l Board, State, Province and No.)

CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE

We certify that the field assembly construction of all parts of this vessel conforms with the requirements of Section VIII, Division 1 of the ASME Boiler and Pressure Vessel Code.

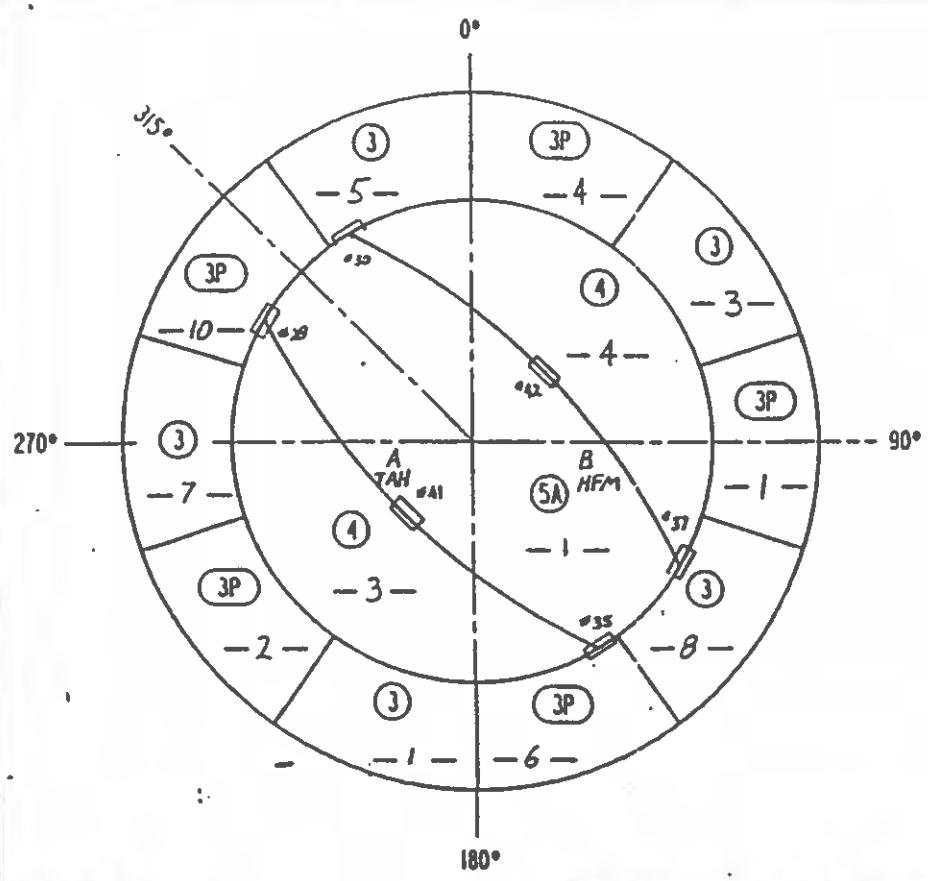
"U" Certificate of Authorization No. 20,126 expires April 20, 1993 FAD 5-22-90

Date 5/20/90 Co. name CBI Na-Con, Inc. (Manufacturer that completed and constructed field assembly) Signed (By Representative)

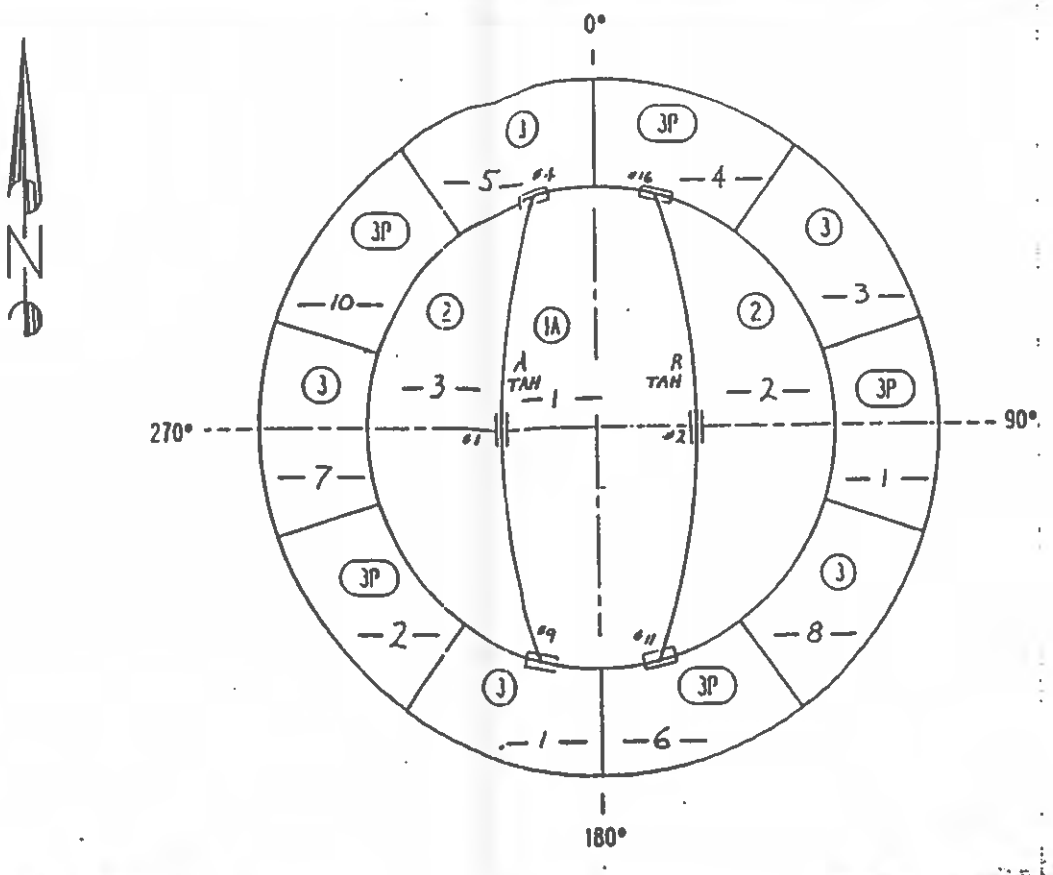
CERTIFICATE OF FIELD ASSEMBLY INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of and employed by H.S.B.I. & I Co. of Hartford, Connecticut have compared the statements in this Manufacturer's Data Report with the described pressure vessel and state that parts referred to as data items 7, 11, & 18, not included in the certificate of shop inspection, have been inspected by me and that, to the best of my knowledge and belief, the Manufacturer has constructed and assembled this pressure vessel in accordance with ASME Code, Section VIII, Division 1. The described vessel was inspected and subjected to a hydrostatic test of 29 psi. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 5-20-90 Signed Frank A. Dowell (Authorized Inspector) Commissions NB 7599-TX 804 (Nat'l Board (incl. endorsements), State, Prov., and No.)



TOP PLAN



DOTTON HEAD PLATES
INSIDE VIEW

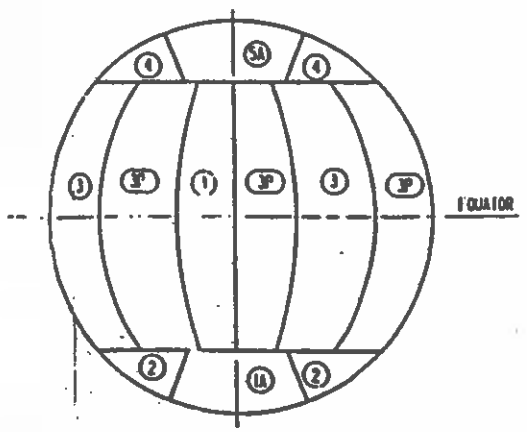
NDE-PERSONNEL MT & PT ONLY		NAME OF WELDER	I.D.
BILLY D CHILDRESS		THOMAS A HERNANDEZ	TAH
WILLIAM H SATTERSFIELD		HOWARD E MINTER	LEM
JOHN D WILLIAMS			
LIST NDE PROCEDURES USED - PT ONLY	SEAM I.D. IF REQ'D		
MT 5Y REV 1	ALL *		
MT 8 REV 2	ALL *		
LIST WELD PROCEDURE	SEAM I.D. IF REQ'D		
GWPS-SMA REV 14	ALL		
WPS E7018	ALL		

FOR AUTHORIZED INSPECTOR ONLY All Syst A.T. welds required to be
Acceptable Syst A.T. required for 12-21-00
Visual only for Hydro S.T.
12/13/00

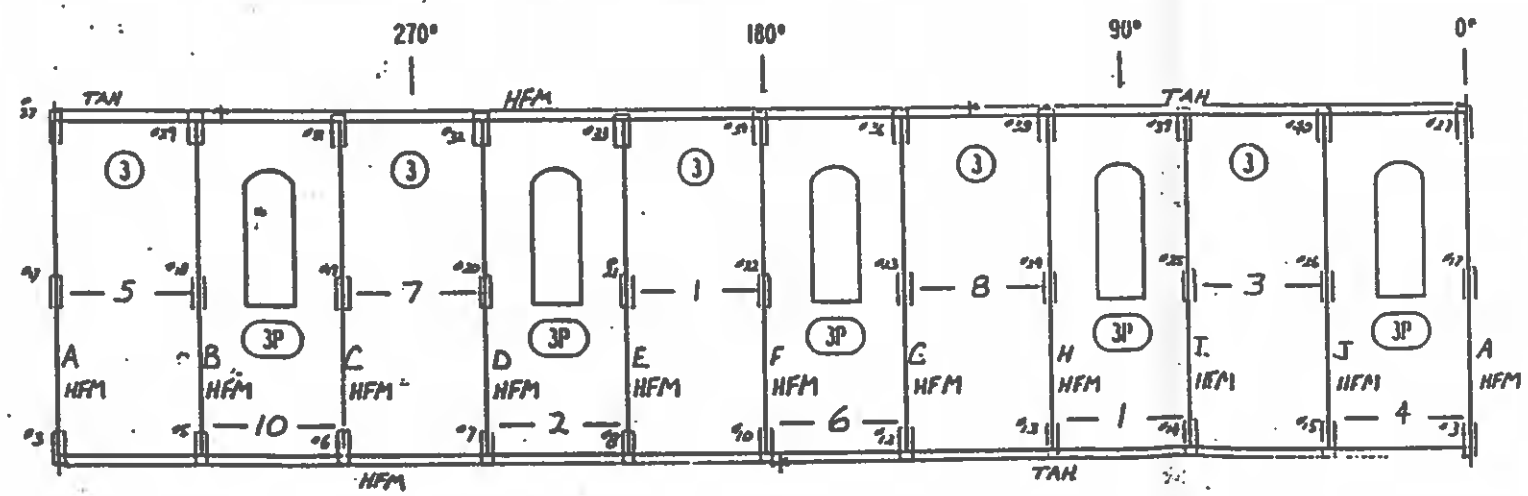
* INCLUDES BACK GOUGED SURFACES

NOTES:

1.) RECORD MATERIAL I.D. FOR EACH PIECE OR ASSEMBLY.
2.) RECORD WELDERS I.D. ON EACH SEAM.
3.) RECORD SEAM I.D. & R.T. INTERVALS (FIRST & LAST FOR 100%) OR LOCATION FOR SPOTS.



ELEVATION

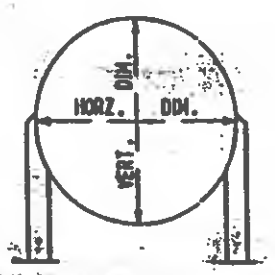


DEVELOPED ELEVATION OF EQUATOR R's

(OUTSIDE VIEW)

VESSEL DIAMETER	
VERTICAL	24'
HORIZONTAL N/S	24'
HORIZONTAL E/W	24'

RECORD VESSEL FINAL AS-BUILT DIMENSIONS



WHEN COMPLETE
FORWARD: SPEC CONSTRUCTION OFFICE ONE LEGIBLE AND WORK COPIES IF ANY
CONSTRUCTION OFFICE: KEEP ONE COPY IN CONSTRUCTION OFFICE FILE
SPEC LEGIBLE COPY TO CERTIFYING ASSOCIATE

I CERTIFY THAT THIS RECORD IS COMPLETE AND ACCURATE IN ACCORDANCE WITH SECTION 5 OF DIVISION 4 OF THE O.C. MANUAL.

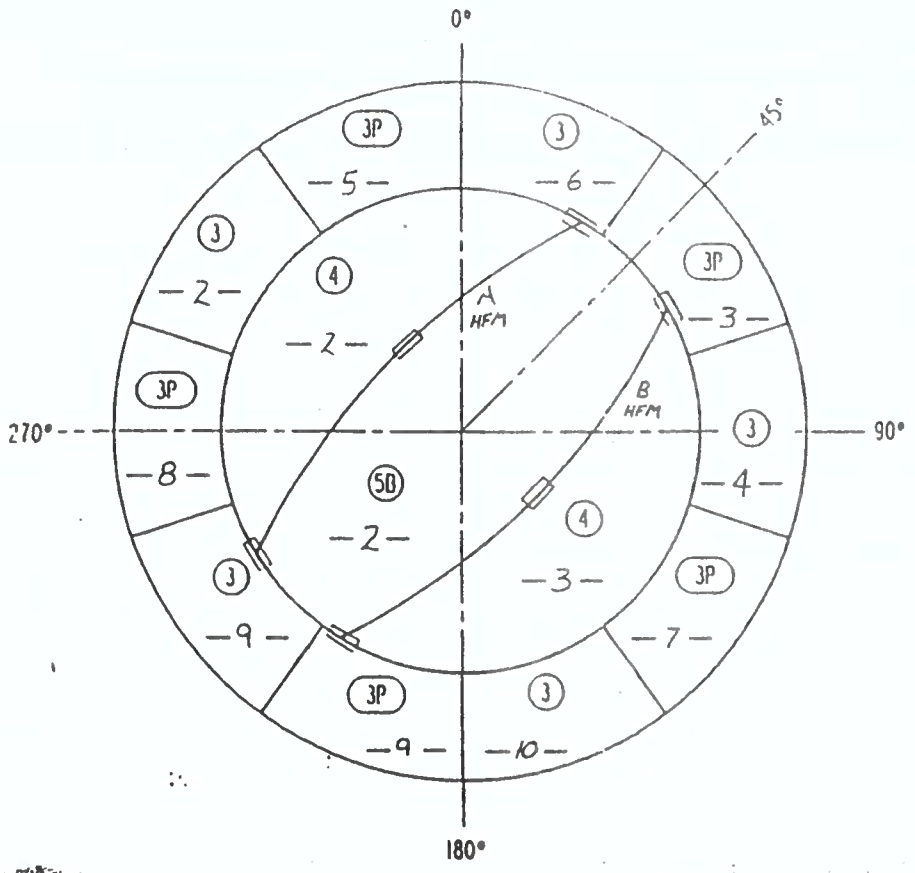
John D. Williams — 5/3/01
ANTHONY G. O.A. SUPERVISOR — DATE

95150481 JDN

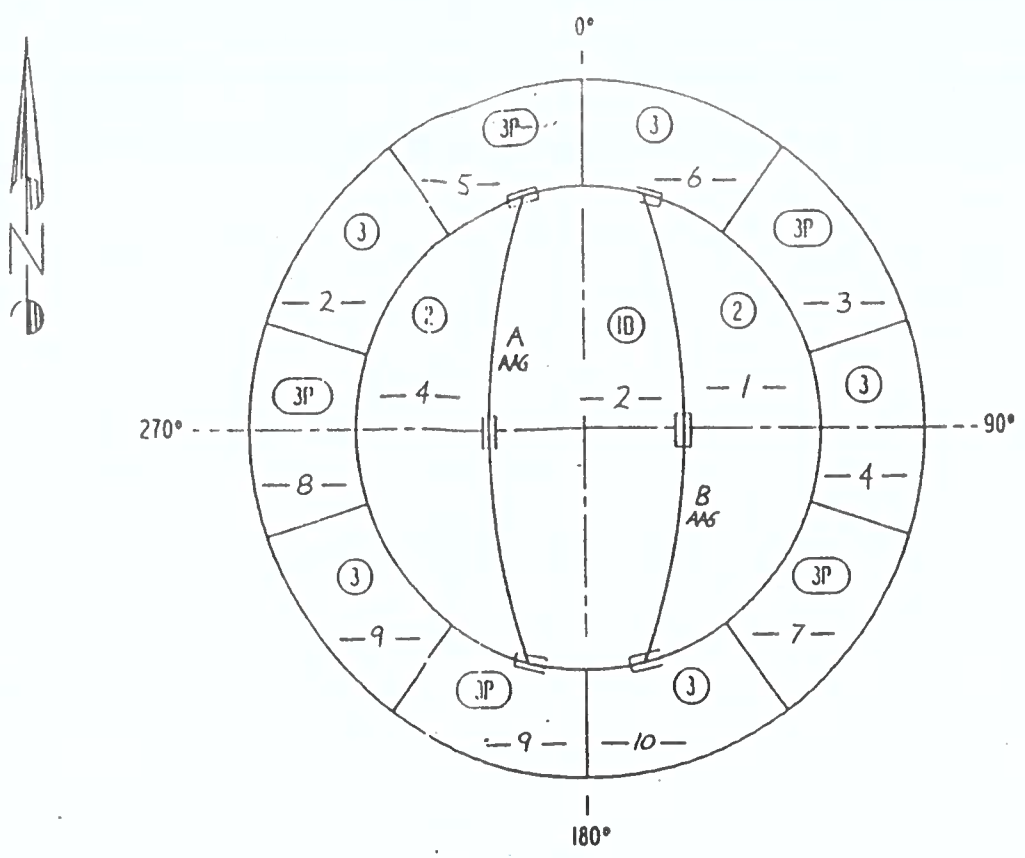
REVISE CHANGE FROM PREVIOUS ISSUE

CBI

RECORD DRAWING



TOP PLAN



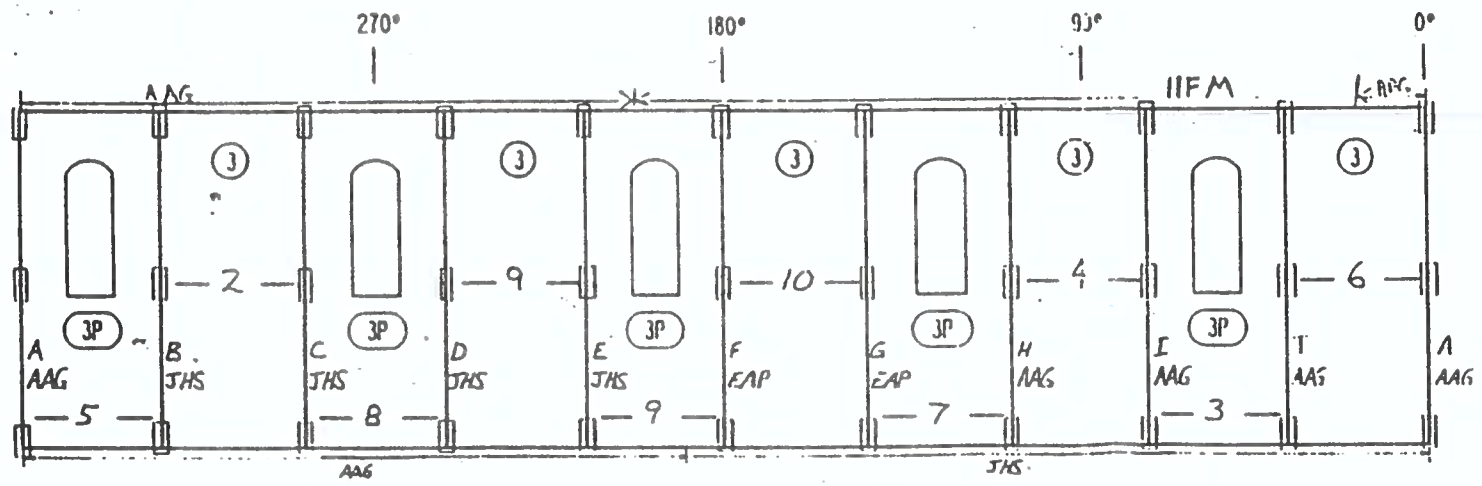
BOTTOM HEAD PLATES
INSIDE VIEW

NDE PERSONNEL MT & PT ONLY		NAME OF WELDER	I.D.
BILLY D CHILDRESS		ANADOE AGUTIERREZ	AAG
WILLIAM H SATTERFIELD		ERNEST A PRICE	EAP
ROYCE E RIDENS		JOSE H SALINAS	JHS
JOHN D WILLIAMS		HOWARD E MINTER	HEM
LIST NDE PROCEDURES USED - PT ONLY	SEAM I.D. IF RT'D		
MT 5Y REV 1	ALL *		
MT 8 REV 2	ALL *		
LIST WELD PROCEDURE	SEAM I.D. IF RT'D		
GWPS-SMA REV 14	ALL		
WPS E7018	ALL		

FOR AUTHORIZED INSPECTOR ONLY, all spot RT will be waived by RT Acceptable R.T. waived 5-13-90 Visual Ready for Hydrotest 5-13-90

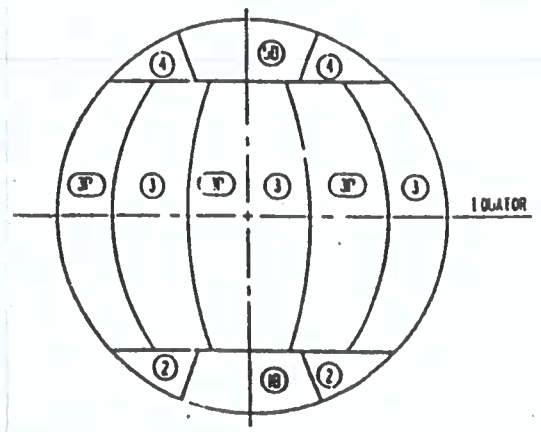
* INCLUDES BACK GOUGED SURFACES

INSTRUCTIONS:
1.) RECORD MATERIAL I.D. FOR EACH PIECE OR ASSEMBLY.
2.) RECORD WELDERS I.D. ON EACH SEAM.
3.) RECORD SEAM I.D. & R.T. INTERVALS (FIRST & LAST FOR 100%) OR LOCATION FOR SPOTS.



DEVELOPED ELEVATION OF EQUATOR ℄'s

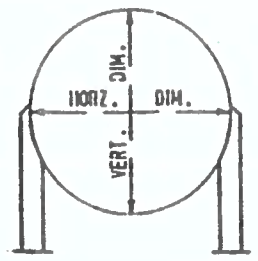
(OUTSIDE VIEW)



ELEVATION

VESSEL DIAMETER	
VERTICAL	26'
HORIZONTAL N/S	26'
HORIZONTAL E/W	26'

RECORD VESSEL FINAL AS-BUILT DIMENSIONS



WHEN COMPLETE
FOREMAN: SEND CONSTRUCTION OFFICE ONE LEGIBLE AND WORK COPIES IF ANY
CONSTRUCTION OFFICE: KEEP ONE COPY IN CONSTRUCTION OFFICE FILE
SEND LEGIBLE COPY TO ENGINEERING ASSIGNED

I CERTIFY THAT THIS RECORD IS COMPLETE AND ACCURATE IN ACCORDANCE WITH SECTION 5 OF DIVISION 4 OF THE O.C. MANUAL.

WELDING & Q.A. SUPERVISOR — DATE 5/7/90

▶ INDICATES CHANGE FROM PREVIOUS ISSUE

CBI

RECORD DRAWING
(1) - 26'- 0 ϕ x 15 PSIG SPHERE
SPHERE °C-1208

Customer's No. 19611-SC-C-21-HAC
By LAH Chkd [illegible] Date 12-19-89
F. S. LIPNICKI
Engineering Supervisor

Contract No. S90515-4
Dwg. R2 Rev. 0
Sheet

THIS DRAWING WAS GIVEN PREPARED FOR AND IS THE PROPERTY OF CBI AND IS TO BE USED ONLY FOR CONSTRUCTION OF EQUIPMENT OR STRUCTURES BY CBI AND IS NOT TO BE USED IN PART FOR ANY OTHER PURPOSE WITHOUT PERMISSION.

95150R2.DGN

APPENDIX B
SECONDARY CONTAINMENT CALCULATIONS

CALCULATION OF CONTAINMENT CAPACITY

Total Volume of Containment

104' x 54' x 3' - 1/2(10'x10'x3') - 1/2(5'x5'x3')
16,848 ft^3 - 150 ft^3 - 37.5 ft^3
16,660.5 ft^3

Net Volume Available for Containment

16,660.5 ft^3 - 18 supports @ 17 ft^3 ea
16,660.5 ft^3 - 306 ft^3 = 16,354.5 ft^3

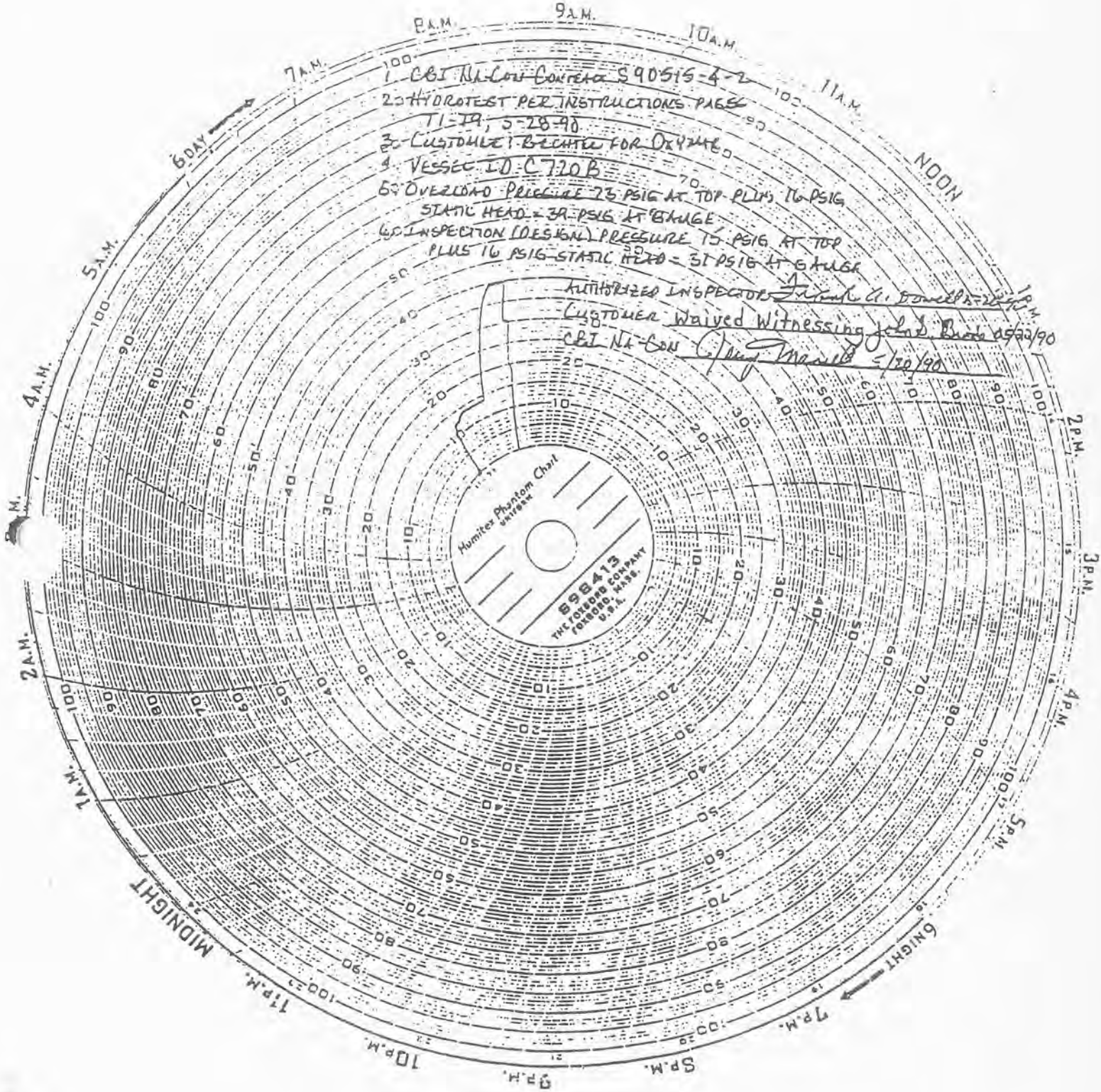
Volume of rainfall associated with 25 years, 24 hr. rainfall event (8.8") From Technical Bulletin No. 40, Weather Bureau.

.733' x 5553.5 ft^2 = 4071 ft^3

Net Volume	(16,354.5 ft^3)
- Rainfall Volume	(4071 ft^3)
Remaining Volume	(12,283.5 ft^3)

The remaining volume (12,283.5 ft^3) is greater than 100% of the volume of the largest tank 65,000 gallons or 8690 ft^3.

APPENDIX C
TIGHTNESS TESTING RESULTS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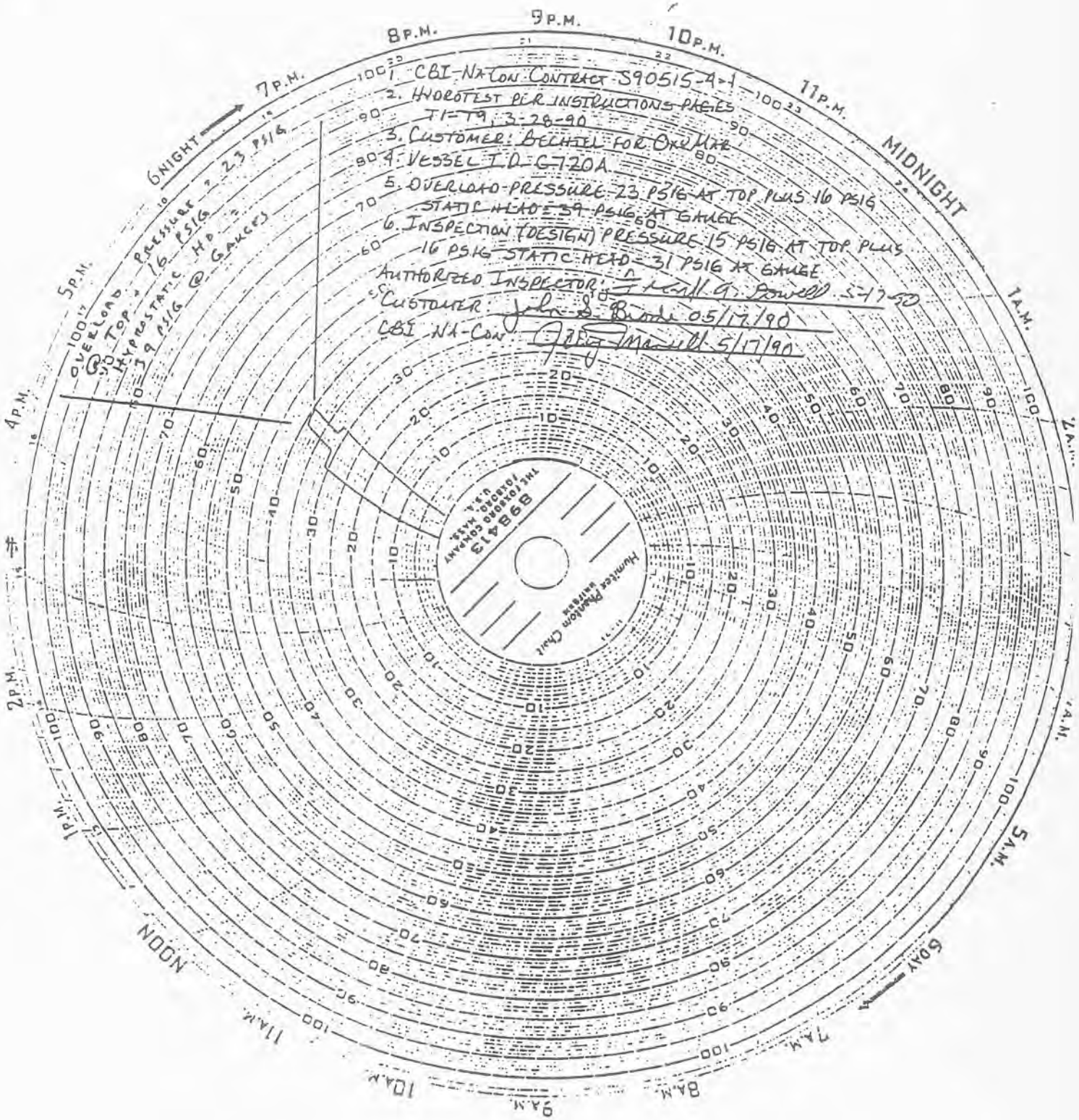
T1-T9, 5-28-90
3. CUSTOMER: BECHTEL FOR OXYNOL
4. VESSEL ID: C720B
5. OVERLOAD PRESSURE 23 PSIG AT TOP PLUS 16 PSIG STATIC HEAD = 39 PSIG AT GAUGE
6. INSPECTION (DESIGN) PRESSURE 15 PSIG AT TOP PLUS 16 PSIG STATIC HEAD = 31 PSIG AT GAUGE
AUTHORIZED INSPECTOR [illegible] 5/22/90
CUSTOMER Waived Witnessing John D. Burke 5/22/90
CBI NA-CON Greg Mansell 5/20/90
Humitex Phantom Chart
98413
THE FOXBORO COMPANY
FOXBORO, MASS.
U.S.A.
6 DAY
MIDNIGHT
NOON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T1=T9, 3-28-90
3. CUSTOMER: BECHTEL FOR OKEMAH
4. VESSEL I.D. G-720A
5. OVERLOAD PRESSURE 23 PSIG AT TOP PLUS 16 PSIG STATIC HEAD = 39 PSIG AT GAUGE
6. INSPECTION (DESIGN) PRESSURE 15 PSIG AT TOP PLUS 16 PSIG STATIC HEAD = 31 PSIG AT GAUGE
AUTHORIZED INSPECTOR: Harold G. Powell 5-17-90
CUSTOMER: John L. Brooks 05/17/90
CBI NA-CON: Greg Maxwell 5/17/90
OVERLOAD PRESSURE = 23 PSIG
@ TOP = 16 PSIG
HYDROSTATIC HD = 39 PSIG @ GAUGES
TO = 39 PSIG @ GAUGES
MIDNIGHT
NOON
6 NIGHT
6 DAY
Hunter Pemberton Chart
89813
THE FOXBORO COMPANY
FOXBORO MASS.
U.S.A.

Appendix C

Example Daily Inspection Form

Prepared by: Anna Longnecker
Rev./Mod: 08/29/24

Occidental Chemical Ingleside VCM Plant

Hazardous Waste Storage Inspection Record Date:_____

A check Indicates that the following items are compatible with the requirement of 40 CFR 264.175 RCRA Regulation:

Note: If any issues are detected, an entry must be made in the issues column. Each boxed has to be individually answered.

1. **All problems must be reported to the Shift Supervisor immediately. If further support is needed, the Inspector must take out a notification in the system.**
2. **The Process Area Supervisor will review the notifications in the morning and report in the 7:30 am meeting. The Process Area Supervisor will add the containment/liner notifications to the Daily Guidelines, until completion.**
3. **The Area Planner will progress the notifications to a work order.**
4. **Shift Supervisor: Along with the inpector, the shift supervisor needs to sign off each shift.**

EQUIPMENT INSPECTED	07:00	11:00	15:00	19:00	23:00	03:00	List issues Detected
VCM/EDC C-720A Sphere (No leaks,bulges, pitting, damage)							
VCM/EDC C-720B Sphere (No leaks,bulges,pitting, damage)							
G-720A/B Pumps (No seal leaks, damage)							
Flanges, Valves, Piping (No seal leaks,pitting, damage)							
H.E. Circ. Loop to C-450 (No leaks, pitting, damage)							
H.E. Circ. Loop to C-240 (No leaks, pitting,damage)							
H.E. Circ. Loop to C-2450 (No leaks, pitting, damage)							
Firewall drain valves are closed (3 valves) (No leaks,corrosion, damage)							
Containment/Liner-No cracks/bulges or concrete showing.							
No water in the containment (If yes: Remove within 24 hours)							
Tank: Legs, Seams, Ladders, Foundation (No leaks, damage)							

Hazardous Waste Dumpsters:
Hazardous Waste Dumpsters at Truck Loading (yes/no)_____Inspected (yes/no)_____(Properly labeled, no leaks, cover secured)

Containment/Liner Damage:
When damage is found, immediately notify the shift supervisor and the inspector put in a notification.
Inspector: Check the Daily Guidelines to make sure a notification has not been put in already-to prevent dupicate notifications.

Regulatory Information:
This document serves as the 24 hour leak detection system per RCRA standards. **All inspections should be conducted at the designated times and this record should be kept on file for a minimum of 5 years.**

Rain water must not be allowed to stay in the containment area under C-720 A/B for more than 24 hours after it has stopped raining.

Documentation:
Corrective action taken including notification number. If rain water is in the containment area, document how and when it was removed:

_____

_____

Print Name
Day Shift
Inspector: _____ **Supv.**:_____
Signature
Inspector: _____ **Supv.**:_____

Print Name
Night Shift
Inspector: _____ **Supv.**:_____
Signature
Inspector: _____ **Supv.**:_____

Appendix D

Closure Plan

Tank C-720A

Closure Plan and Cost Estimate

OxyChem
Ingleside, Texas

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Appendix A Supporting Information for Closure Cost Estimates

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 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 x 1.042 x 1.070 x 1.036 x 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)
Closure activities begin – after prior 45 day notification	
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
Waste Removal and Disposal of Contents		
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
Decontaminate Tank with Solvent Flush Then Water Flush and Disposal of Rinsates		
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
Decontaminate Equipment		
10 hours of labor @ $100/hr		$1,000
	Subtotal	$1,000
Laboratory Analysis		
2 samples @ $500/sample		$1,000
	Subtotal	$1,000
Engineer's Inspection and Certification		
24 hours of labor @ $200/hr		$4,800
	Subtotal	$4,800
	Subtotal	$872,430
	10% Contingency	$87,243
	TOTAL	$959,673

NOTE: All costs are in 2019 dollars

Hazardous Waste Permit
Renewal Application

OxyChem
Ingleside, Texas
Permit No. HW-50322
ISWR No. 38280
TXD 982 286 932

Volume 2 of 2

August 2025

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Attachment C	Facility Boundaries Map
Attachment D	Photographs
Attachment E	Process Flow Diagram

Part B Application

Bilingual Notice
Adjacent Landowners List and Map
Plain Language Summary – English
Plain Language Summary – Spanish
Public Involvement Plan Form

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Attachment V.C.1 C-720A Tank System

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Attachment V.I.2 CCIN-2 Halogen Acid Furnace

Attachment VI. Geology Report

Attachment VII.A Facility Closure Plan and Cost Estimates

Attachment VIII. Financial Assurance

Attachment IX. Releases from Solid Waste Units and Corrective Action

Attachment X. Air Emission Standards

Attachment XI. Compliance Plan

Attachment XII. Hazardous Waste Permit Application Fee

Attachment XIII. Confidential Material

Attachment V.C.2

C-720B Tank System

Attachment V.C.2

Tank C-720B Report

OxyChem
Ingleside, Texas

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Appendices

Appendix A Engineering Drawings
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1.0 Introduction

OxyChem - Ingleside, TX utilizes tanks for storing and managing hazardous wastes prior to subsequent processing and/or treatment. The tanks receive wastes from various sources, which primarily consist of production waste streams from the facility and other OxyChem facilities. Since these tanks may store hazardous waste for greater than 90 days and may also receive hazardous waste from offsite sources, they are subject to RCRA permitting requirements. This report has been prepared to provide technical information for the RCRA storage tank, which has a facility designation of Tank C-720B, in accordance with 30 TAC 305.50 as well as relevant TCEQ application form requirements.

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 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).

2.3 Secondary Containment

Secondary containment meeting the RCRA requirements of 40 CFR 264.193 is provided for Tank C-720B. As such, the containment system for Tank C-720B is designed using the following parameters:

- Containment is constructed of materials compatible with the wastes stored, and the containment surfaces are coated with an impermeable liner material (e.g., epoxy);
- Secondary containment for ancillary equipment in the immediate vicinity of the tank is provided by the secondary containment system associated with the tank system;
- Containment and associated foundation have adequate strength to prevent failure;
- Containment has a leak detection system that will detect a leak within 24 hours; and
- Liquids (e.g., spills, precipitation) can be removed from the containment within 24 hours.

Additional details regarding the above design parameters are provided below.

Secondary containment for Tank C-720B is provided via a concrete containment vault/external liner. The containment system is sufficient to contain 100% of the 65,000 gallon tank capacity as well as precipitation from a 25-year, 24-hour storm. Per RCRA requirements, the tank system is equipped with a leak detection system capable of detecting a leak within 24 hours. If liquids are released, their presence is detected through the daily inspections of the tank system performed by operations personnel. Significant liquids (i.e., not minor quantities of rainwater) detected in secondary containment will be removed immediately (within 24 hours). If removed liquids are wastes (i.e., not minor quantities of rainwater), response and investigation activities into the cause of the release will be launched immediately. Additional details on the response and investigation process are contained in a later section of this report.

Accumulated rainfall in the secondary containment system are removed as soon as practical (e.g., within 24 hours) so that adequate "freeboard" in the system can be maintained. The floor of the secondary containment system is slightly sloped toward a drainage sump to facilitate removal of rainwater from the system.

3.0 Operations and General Hazard Prevention

The location of Tank C-720B complies with siting restrictions of national codes. The tank is located approximately 2,000 feet from the nearest property boundary, approximately 2,500 feet from the closest public road (Highway 361 on the northern boundary of the plant), and approximately 4,000 feet from La Quinta Channel, which is along OxyChem's southern property boundary.

Section 2-3.1 of the National Fire Protection Association's (NFPA) Flammable and Combustible Liquid Code (NFPA 30) specifies maximum allowable distances from above-ground flammable or combustible liquid storage tanks to public ways, streets, alleys, and the facility's property line. Section 2-3.1.3 (Table 2-2) of that code, in particular, is applicable to OxyChem's Tank C-720B. The most stringent distance requirements of Table 2-2 provides a minimum distance of not less than 50 feet from any tank to the facility's property line that is or can be built upon, including the opposite side of a public way, and not less than 25 feet from the closest side of any public way. Based on the distances mentioned above, the tank is located well beyond the NFPA distance requirements for public ways and the facility's property line.

3.1 Normal Operations

Normal operations will vary depending on how tanks are fed. Since the tank is fed from piping from a known source, routine analysis and/or compatibility testing will not typically be necessary. During normal operations of RCRA tanks, including any future change of service (should it occur), OxyChem will ensure compatibility of materials, implement controls to prevent spills or overflows from the tank or containment system, and conduct/document inspections.

3.2 Waste Analysis

OxyChem will ensure that waste and materials placed in the same tank system are compatible. Since the tank is basically dedicated for use for a limited number of established waste streams, this should not be of concern unless a significant change in production processes occurs.

Hazardous waste will not be placed in a tank that has not been decontaminated if it previously held an incompatible waste or material. The facility will evaluate properties of wastes managed in the tank to verify that incompatibility of wastes does not occur. This evaluation

may consist of process knowledge and/or testing as described in the Waste Analysis Plan (Attachment IV.D).

4.0 Air Emission Standards for RCRA Tank Systems

4.1 Subpart BB Requirements for Ancillary Equipment

Tank C-720B is subject to the RCRA air emission standards of 40 CFR Part 264, Subpart BB as a result of materials (e.g., wastes demonstrating the characteristic of ignitability) managed in the unit.

Attachment X of this application (Air Emissions Report) describes requirements of Subpart BB emission standards as well as options available to the facility under that program. The following sections describe how Subpart BB is implemented for ancillary equipment associated with Tank C-720B. However, OxyChem may elect to implement other options available under the Subpart BB program described in Attachment X of this application. Since changes in Subpart BB program implementation options are not reflected in the modification table reflected in 40 CFR 270.42, options may be implemented by OxyChem without modification and are reflected in the facility operating record and updated information would be included as part of a significant application revision (e.g., renewal application, modification that significantly affects equipment, etc.).

40 CFR §264.1052 - Standards: Pumps in Light Liquid Service

Tank C-720B may have pumps in light liquid service and will monitor them on a monthly basis. Monitoring would be performed per the requirements of Subpart BB and EPA Method 21.

40 CFR §264.1053 - Standards: Compressors

Tank C-720B is not expected to have compressors in hazardous waste service.

40 CFR §264.1054 - Standards: Pressure Relief Devices in Gas/Vapor Service

Tank C-720B may have pressure relief devices in gas/vapor service.

40 CFR §264.1055 - Standards: Sampling Connecting Systems

Sampling of this tank is non-routine and typically consists of taking grab samples through inlet or exit piping. Therefore, it does not meet the definition of a "sampling connection system", and is not subject to this section.

40 CFR §264.1056 - Standards: Open-Ended Valves or Lines

Each open-ended valve or line is equipped with a cap, blind flange, plug or a second valve. The requirements of this section will be followed each time an open-ended line is opened.

40 CFR §264.1057 - Standards: Valves in Gas/Vapor Service or in Light Liquid Service

Each valve in gas/vapor and or light liquid service is monitored on a quarterly basis at a leak definition of 10,000 parts per million (ppm). When leaks are detected, repairs and instrument rechecks will be performed per regulatory requirements.

40 CFR §264.1058 - Standards: Pumps and valves in heavy liquid service, pressure relief devices in light liquid service or heavy liquid service, and flanges and other connectors

The facility performs evaluations of components in hazardous waste service. It is not expected that there will be components in heavy liquid service. If they are determined to be in heavy liquid service, the requirements of this section will be documented. When a leak is detected by visual, olfactory, or audible inspection, repair and monitoring requirements will be followed per the regulation.

40 CFR §264.1059 - Standards: Delay of Repair

When delay of repair is necessary and meets the requirements of this section, the facility may implement delay of repair in accordance with this section.

40 CFR §264.1060 - Standards: Closed-Vent Systems and Control Devices

Tank C-720B has a closed-vent system and control device for this unit.

40 CFR §264.1061 - Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Percentage of Valves Allowed to Leak

If the facility implements these alternative standards for Tank C-720B, it will be done in accordance with the requirements of this section.

40 CFR §264.1062 - Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Skip Period Leak Detection and Repair

If the facility implements these alternative standards for Tank C-720B, it will be done in accordance with the requirements of this section.

40 CFR §264.1063 - Test Methods and Procedures

The facility will follow monitoring procedures spelled out in EPA Method 21 to perform instrument checks of equipment.

40 CFR §264.1064 - Recordkeeping Requirements

As further described in the Air Emissions Report (Attachment X), the facility maintains records required by and in the manner identified in this section.

40 CFR §264.1065 - Reporting Requirements

As further described in the Air Emissions Report (Attachment X), the facility will submit semiannual reports in accordance with the requirements identified in this section.

4.2 Subpart CC Requirements for Tanks

As further described in the Air Emissions Report (Attachment X), air emission standards for storage tanks (40 CFR 264, Subpart CC) are applicable to tanks having a volatile organic (VO) concentration of 500 ppm or greater. Waste stored in Tank C-720B has a VO concentration above 500 ppm. As such, the tank is subject to Subpart CC requirements for tanks and complies with requirements for Level 2 Controls.

5.0 Tank Operations

5.1 Inspections

Tank C-720B is inspected at the frequency noted and for the equipment components reflected on the inspection schedule (Table III.D of the Part B application form). These inspections are performed by facility representatives, which may include contractors in certain situations. Records of inspections are maintained using a written or electronic inspection form to note problems or irregularities (failures). Based on these problems, work requests are submitted to rectify the problems. Inspection personnel are responsible for ensuring that appropriate corrective action is taken. The time of completion and the nature of the corrective action, as well as the name of the inspection personnel, are documented on the inspection form.

Records of inspections are maintained at the facility. These records may be maintained in a "paper" or "electronic" system and are kept as part of the facility operating record. Records are kept for at least three years from the date of the inspection and contain the following information:

- Date and time of the inspection;
- Name of the inspector conducting the inspection;
- Notations of observations made; and
- Date and description of any repairs or remedial actions taken.

Appendix C is an example daily inspection form for Tank C-720B. The form is provided only for illustration of typical forms used at the facility to conduct inspections. Specific details of forms and components (e.g., number and location of fire extinguishers dedicated for RCRA service will change) used at the facility may change over time; however, the content of the forms will continue to provide compliance with the inspection requirements for the unit. The application will not be updated (i.e., a modification submitted) when changes to forms are made. Instead, copies of current forms will be available at the facility for review.

5.2 Alarms

Tank C-720B has level indicator sensors, signal transmitters, and an alarm to prevent overfilling of tanks. The alarm will alert personnel in order to block out feed lines if an overfill alarm is reached or if leakage is detected.

5.3 Nitrogen Pad and Depad

Tank C-720B is equipped with a nitrogen "pad" system to fill the headspace and piping with slightly pressurized nitrogen. When the pressure in the tank drops below a set point, nitrogen is automatically fed to the tank. This prevents entry of oxygen into the tank and thus prevents ignitable conditions. Vented gas exits through a closed vent system to a control device. The tank is also equipped with a pressure valve to prevent excess pressurization of the tank.

5.4 Preparedness and Prevention

The facility places a high priority on the safety of employees and the public and prevention of damage to the environment. Hazards may occur due to routine operations but may also occur due to unpredictable events such as equipment failure, power outages, fires, or waste leaks or spills. In addition to compliance with RCRA regulations, OxyChem places an extra emphasis on facility design and operating procedures to prevent potential hazards from these sources. As described, Tank C-720B is equipped with safety systems (e.g., alarms, nitrogen padding, overfill alarms) to minimize the potential for leaks or ignitable conditions arising during normal operations. Manual block valves are provided to stop waste flow in case of equipment failure or power outages.

If a leak occurs in the tank system, spill containment and emergency response procedures as described in Section 5.6 will be initiated. Small, contained spills do not require implementation of the Contingency Plan and are collected and then treated and/or disposed of as soon as possible at an authorized facility. Should an emergency occur (i.e., a large spill, fire, or explosion), the Contingency Plan (Attachment III.E) will be implemented.

Since the tank manages ignitable waste, it is protected from sources of ignition. The two primary ignition prevention mechanisms are a nitrogen blanketing system and grounding of the tank to a common facility-wide cathodic protection/grounding system. Further, the tank is in a portion of the facility where smoking is strictly prohibited. Per Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code", a minimum separation distance from the tank to the property boundary is maintained.

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.

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

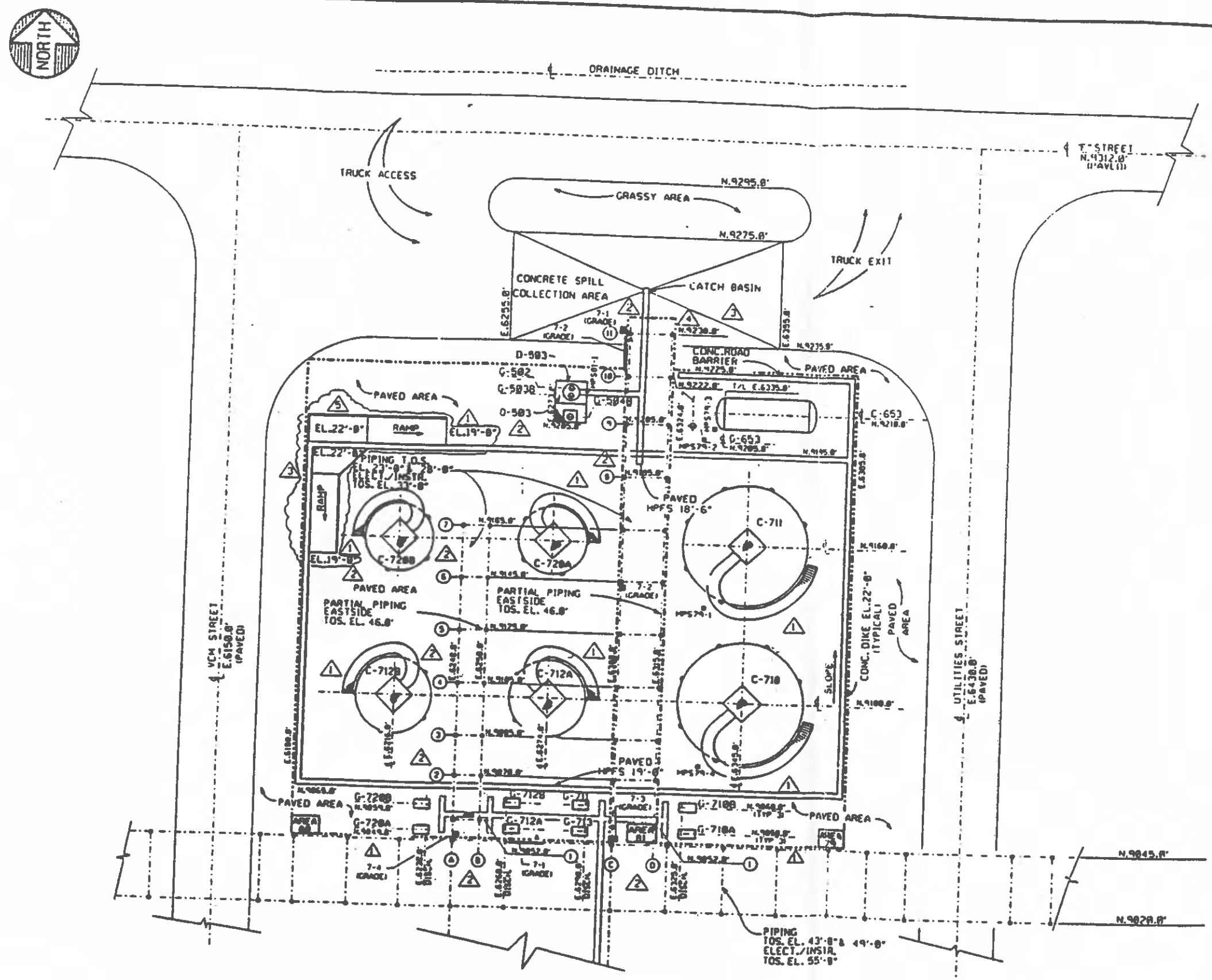
Inflows to the tank will be stopped if an emergency situation occurs involving the tank and/or ancillary equipment, including electrical or equipment failure, or fire. If necessary, the storage tanks may be cooled by using the tank farm water deluge system. Depending upon the magnitude of a spill, a 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 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

Engineering Drawings



COMPT. No.	DESCRIPTION	P.O.S. EL.
C-653	PROPYLENE REFRIG. STORAGE TANK	25'-8"
C-718	WET CRUDE EDC STORAGE TANK	22'-6"
C-711	DRY CRUDE EDC STORAGE TANK	22'-6"
C-712A & B	FINISHED EDC STORAGE TANKS	22'-6"
C-728A & B	EDC LIGHT ENDS & HEAVY ENDS STORAGE TANKS	22'-6"
D-583	EDC/ECO PROD STG AREA STM WTR TANK	
G-502	EDC/ECO PROD STG AREA STM WTR PUMP	
G-5838	EDC/ECO PMP STG UNC STM WTR PUMP	
G-5848	EDC/ECO PMP STG SUMP PUMP	
G-653	PROPYLENE REFRIGERATION MAKEUP PUMP	28'-8"
G-728A & B	DEHYDRATION COLUMN FEED PUMPS	28'-8"
G-711	LIGHT ENDS COLUMN FEED PUMP	28'-8"
G-712A & B	FURNACE FEED PUMPS	28'-8"
G-713	WET CRUDE EDC STORAGE TANK SUMP PUMP	28'-8"
G-728A	EDC LIGHT ENDS LOADING PUMP	28'-8"
G-728B	EDC HEAVY ENDS LOADING PUMP	28'-8"
D-583	EDC/ECO PROD STG AREA STM WTR SUMP	28'-8"

LEGEND:
SWAN STATION ⊕ S.W.A.N. STATION
EYE WASH ⊕ EMERGENCY SHOWER/EYE WASH

NOTES:
1. DELETE
2. SEE UNDERGROUND DRAWING FOR TRENCH LOCATIONS.
3. HPFS=19'-8"

COORDINATES		
	NORTH	EAST
1	N.9791.96'	E.6338.8'
2	N.9791.96'	E.6329.8'
3	N.9791.96'	E.6334.75'
4	N.9791.96'	E.6338.8'
5	N.9791.77'	E.6289.11'

4	1/28/92	ADDED MISC. PIPE SUPPTS	KAM	FT	FTR	---	BM	CB
3	12/16/91	REVISED AS NOTED	KAM	FT	FTR	---	BM	CB
2	8/28/91	REVISED AS NOTED	KAM	FT	FTR	---	BM	CB
1	7/24/90	REVISED CLOUDS & ADDED RAMP	FT	FT	[illegible]	---	[illegible]	[illegible]
0	5/1/89	ISSUED FOR CONSTRUCTION	VW	RDR	LD	LDB	LB	MAP
NO.	DATE	REVISIONS	BY	DATE	APP'D	APP'D	APP'D	APP'D

SCALE 1" = 20'-0" | DRAWN V.WATSON | CHK'D | APP'D

BECHTEL, INC.
HOUSTON

OXYMAR
CORPUS CHRISTI VCM PLANT
INGLESIDE, TEXAS

PLOT PLAN
EDC PRODUCT STORAGE - AREA 7

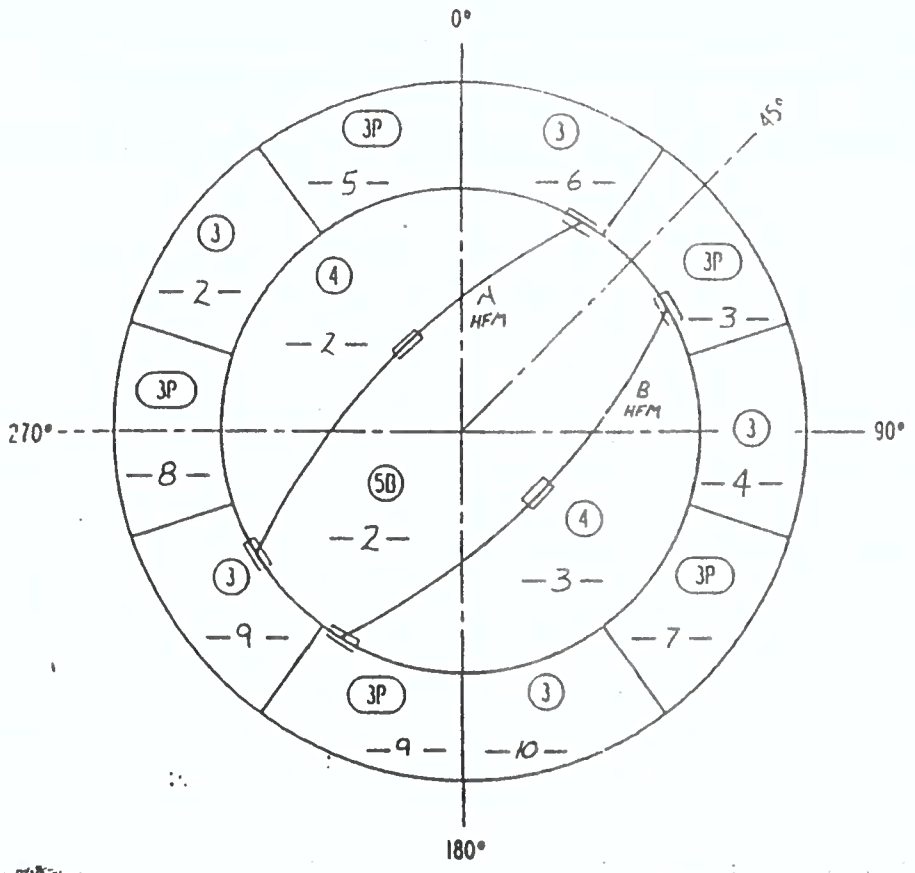
AREA OR BUILDING	TYPE	CHK'D	APP'D

JOB NO.	DRAWING NO.	REV.
19611	70-00-A-788	5

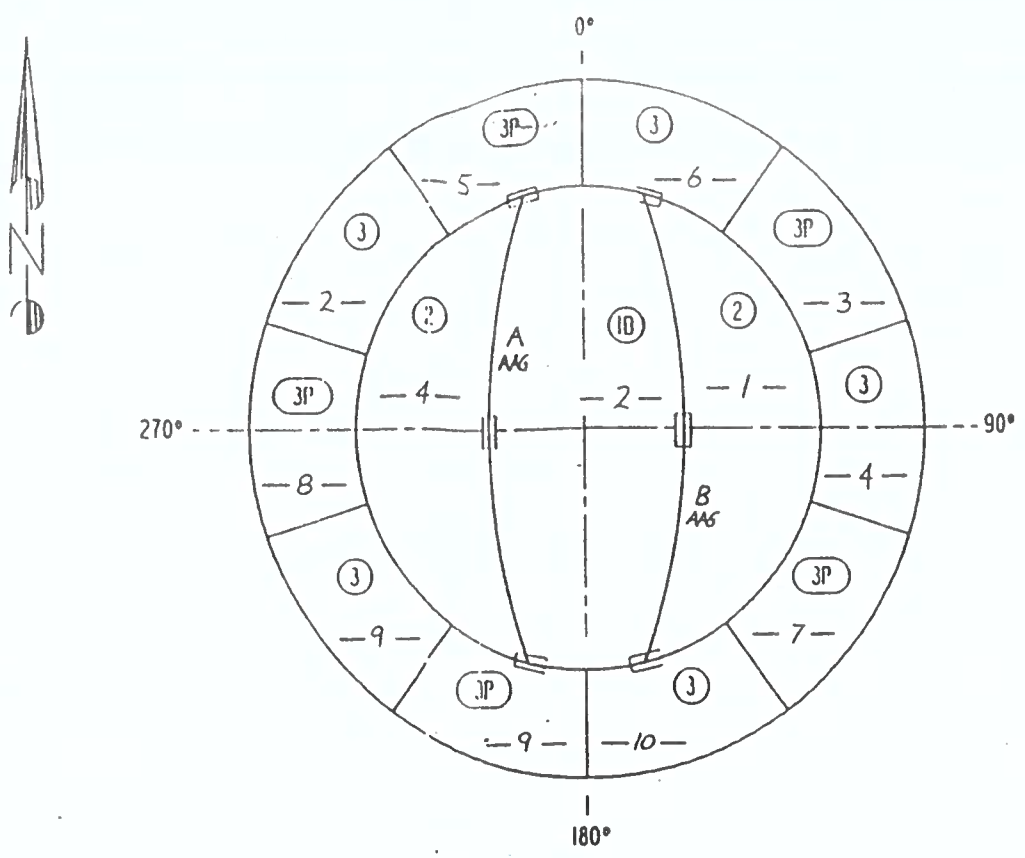
70-00-A-781	PROCESS AREA PLOT PLAN
70-00-A-900	OVERALL MASTER PLAN
REFERENCE DRAWINGS	

0' 10' 20' 40' 60'
ONE INCH = 20'-0"

CADD FILE NAME: 7088A788.DGN CDH 3/28/90 (32.0)



TOP PLAN



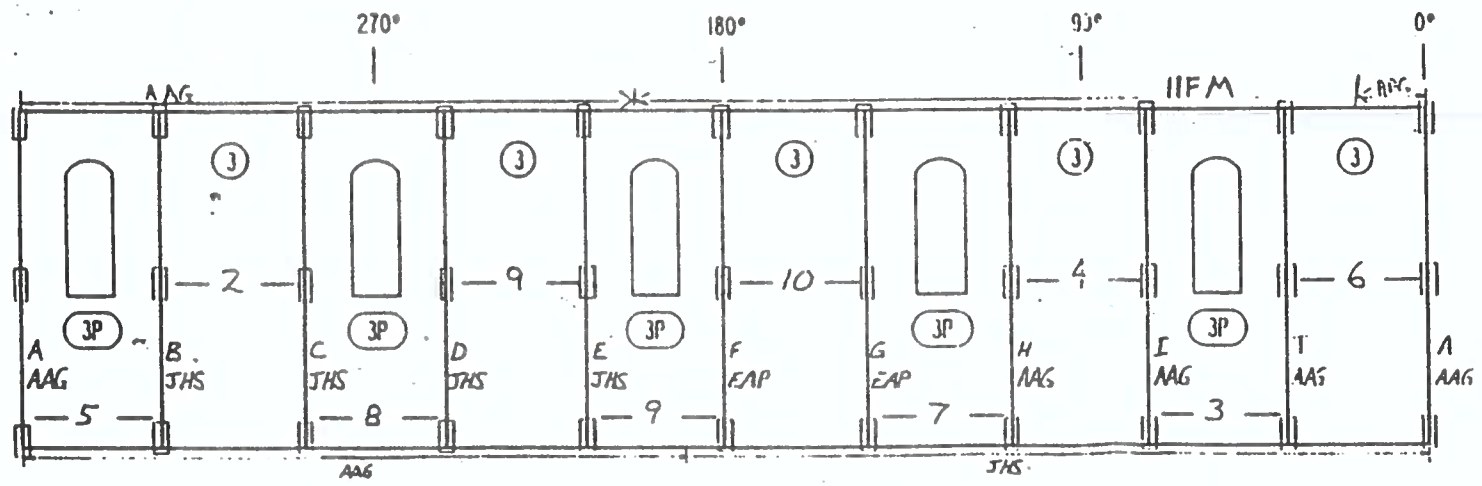
BOTTOM HEAD PLATES
INSIDE VIEW

NDE PERSONNEL MT & PT ONLY		NAME OF WELDER	I.D.
BILLY D CHILDRESS		ANADOE AGUTIERREZ	AAG
WILLIAM H SATTERFIELD		ERNEST A PRICE	EAP
ROYCE E RIDENS		JOSE H SALINAS	JHS
JOHN D WILLIAMS		HOWARD E MINTER	HEM
LIST NDE PROCEDURES USED - PT ONLY	SEAM I.D. IF RT'D		
MT 5Y REV 1	ALL *		
MT 8 REV 2	ALL *		
LIST WELD PROCEDURE	SEAM I.D. IF RT'D		
GWPS-SMA REV 14	ALL		
WPS E7018	ALL		

FOR AUTHORIZED INSPECTOR ONLY, all spot RT will be waived by RT Acceptable R.T. waived 5-13-90 Visual Ready for Hydrotest 5-13-90

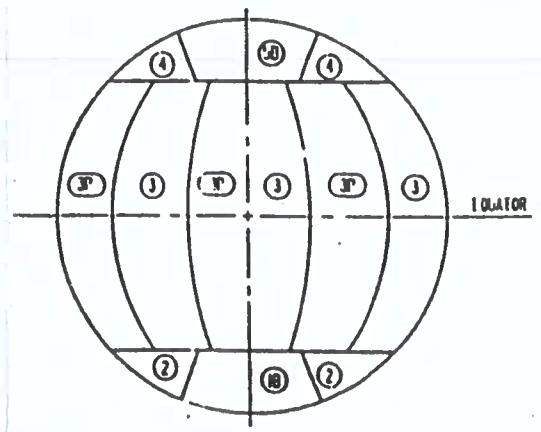
* INCLUDES BACK GOUGED SURFACES

INSTRUCTIONS:
1.) RECORD MATERIAL I.D. FOR EACH PIECE OR ASSEMBLY.
2.) RECORD WELDERS I.D. ON EACH SEAM.
3.) RECORD SEAM I.D. & R.T. INTERVALS (FIRST & LAST FOR 100%) OR LOCATION FOR SPOTS.



DEVELOPED ELEVATION OF EQUATOR ℄'s

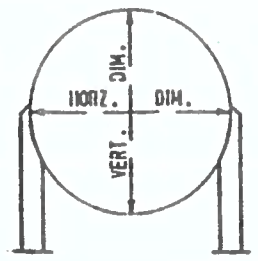
(OUTSIDE VIEW)



ELEVATION

VESSEL DIAMETER	
VERTICAL	26'
HORIZONTAL N/S	26'
HORIZONTAL E/W	26'

RECORD VESSEL FINAL AS-BUILT DIMENSIONS



WHEN COMPLETE
FOREMAN: SEND CONSTRUCTION OFFICE ONE LEGIBLE AND WORK COPIES IF ANY
CONSTRUCTION OFFICE: KEEP ONE COPY IN CONSTRUCTION OFFICE FILE
SEND LEGIBLE COPY TO ENGINEERING ASSIGNED

I CERTIFY THAT THIS RECORD IS COMPLETE AND ACCURATE IN ACCORDANCE WITH SECTION 5 OF DIVISION 4 OF THE O.C. MANUAL.

WELDING & Q.A. SUPERVISOR — DATE 5/7/90

▶ INDICATES CHANGE FROM PREVIOUS ISSUE

CBI

RECORD DRAWING
(1) - 26'- 0 ϕ x 15 PSIG SPHERE
SPHERE °C-1208

Customer's No. 19611-SC-C-21-HAC
By LAH Chkd [illegible] Date 12-19-89
F. S. LIPNICKI
Engineering Supervisor

Contract No. S90515-4
Dwg. R2 Rev. 0
Sheet

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95150R2.DGN

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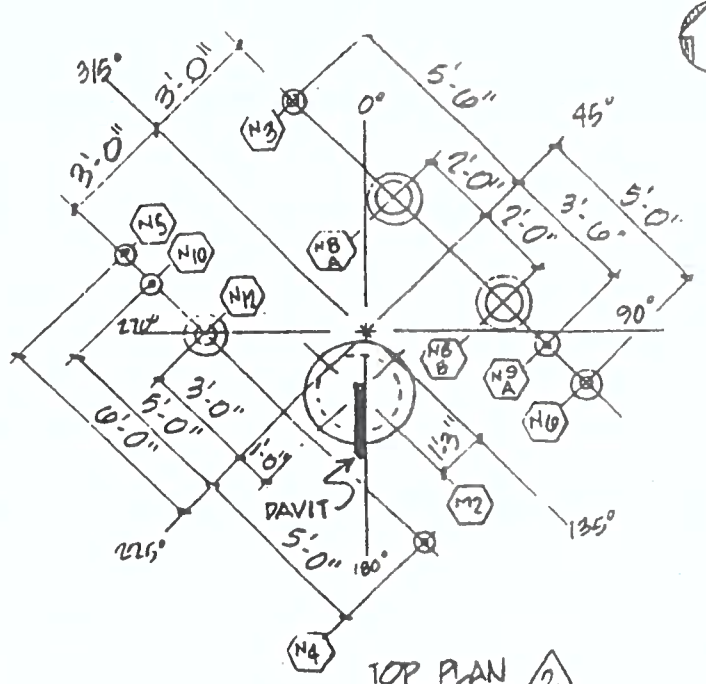
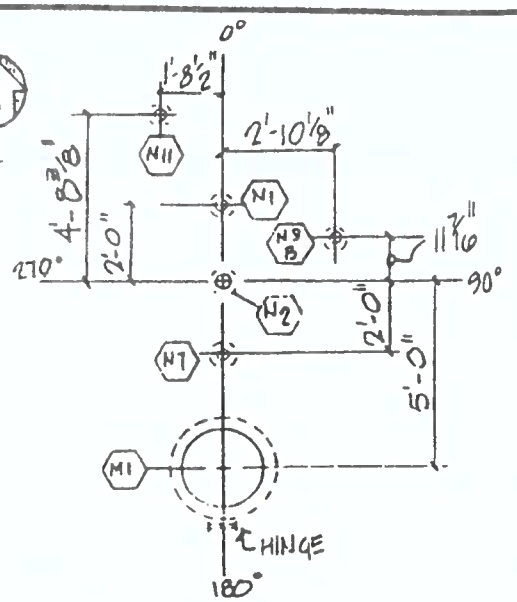
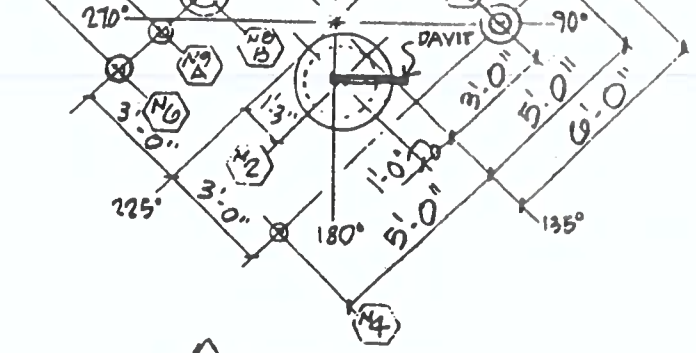


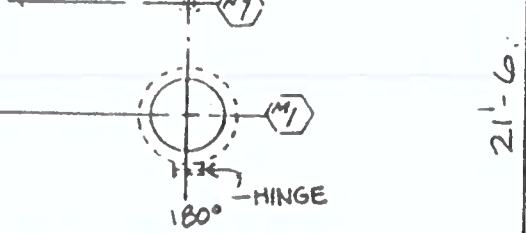
TOP PLAN (C-720A) △2



△2 BOTTOM PLAN (INSIDE VIEW) (C-720A)

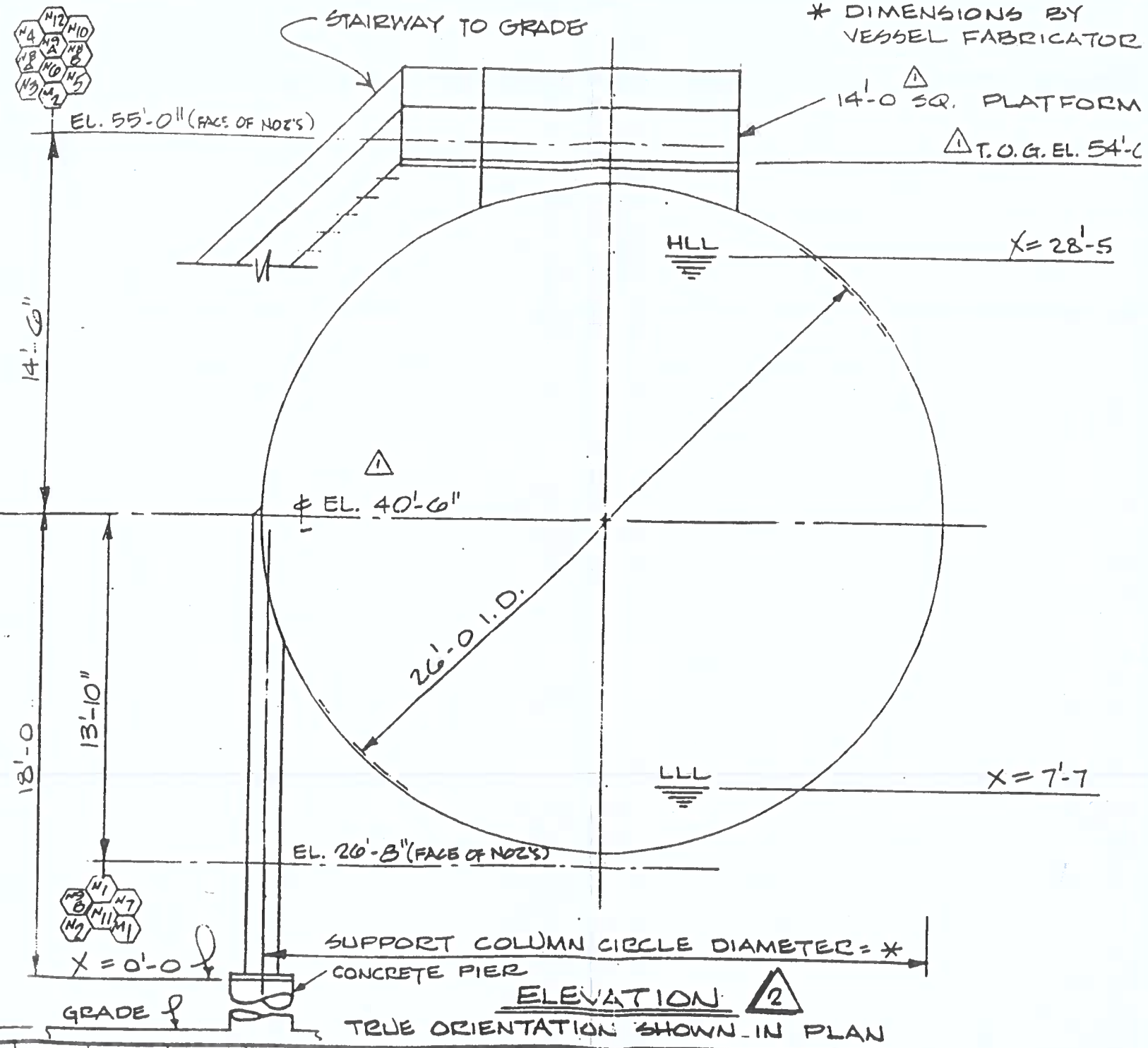


△2 TOP PLAN (C-720B)



△2 BOTTOM PLAN (INSIDE VIEW) (C-720B)

△1 EL. 19'-0" ℄



Mark	No. Req'd	Size	Class	Face	Service and Remarks
M2	1	24"	150	R.F.	MANWAY W/BLIND, STUDS, NUTS & GASKET. SEE NOTE 21.
M1	1	24"	150	R.F.	MANWAY W/BLIND, STUDS, NUTS & GASKET. SEE NOTE 21.
N12	1	6"	300	R.F.	LIT W/STILL WELL PER DWG SA-006C.
N11	1	1½"	150	R.F.	TE △1
N10	1	1½"	150	R.F.	PT △1
N9	2	3"	150	R.F.	LIT/PT △1
N8	2	10"	150	R.F.	PSV △1
N7	1	3"	150	R.F.	DRAIN
N6	1	4"	150	R.F.	VENT W/BLIND, STUDS, NUTS & GASKETS △1
N5	1	2"	150	R.F.	SPARE W/BLIND, STUDS, NUTS & GASKETS △1
N4	1	2"	150	R.F.	PROCESS VENT △1
N3	1	3"	150	R.F.	SPARE W/BLIND, STUDS, NUTS & GASKETS △1
N2	1	4"	150	R.F.	OUTLET W/VORTEX BREAKER PER STD. DWG. C-548 △1
N1	1	3"	150	R.F.	FILL △1

Nozzle, Manway, and Connection Schedule

BECHTEL, INC.
HOUSTON

OCCIDENTAL CHEMICAL CORP.
VCM PLANT
CORPUS CHRISTI, TEXAS

Service: EDC LIGHT ENDS AND EDC HEAVY ENDS/VCM TAR STORAGE TANKS
Equip. No.: C-720A/B Qty. Req'd.: TWO

Job No.	Drawing No.	Rev.
19611	DS-C-720	3

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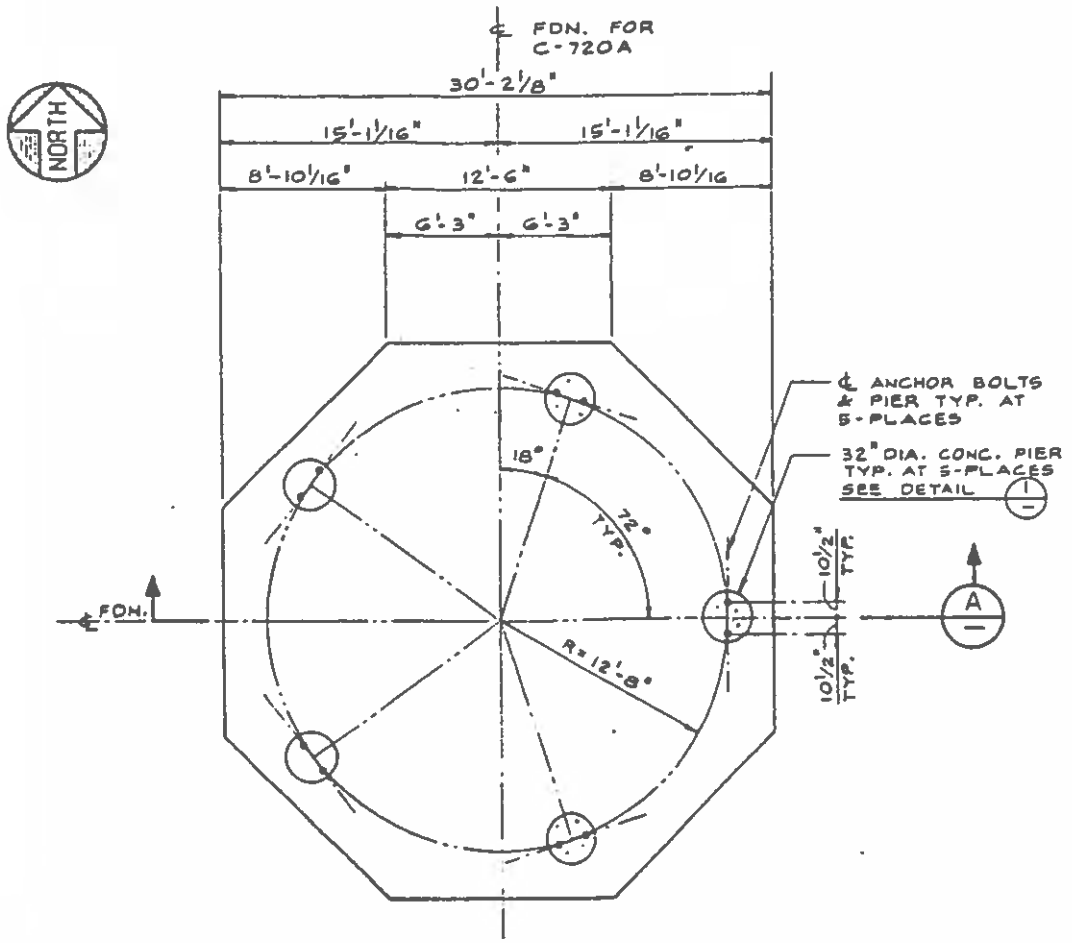
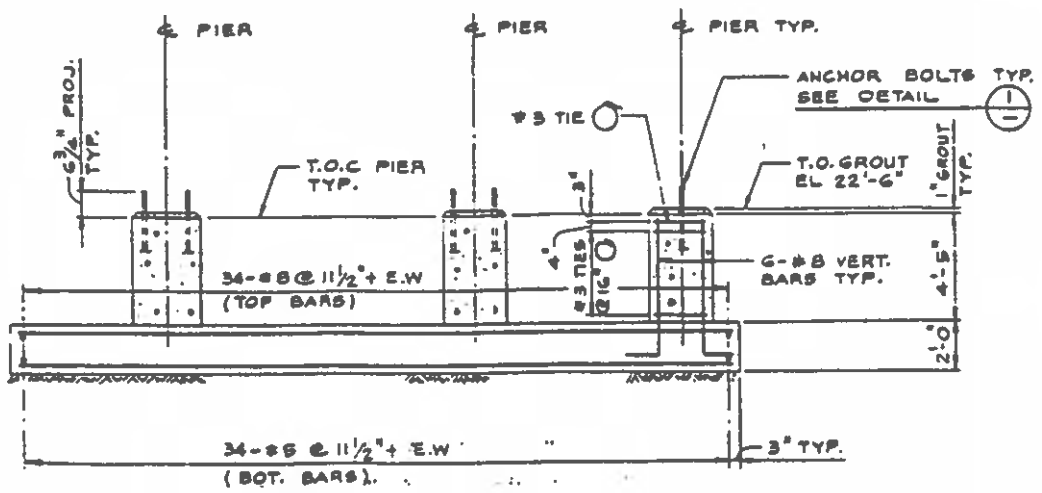
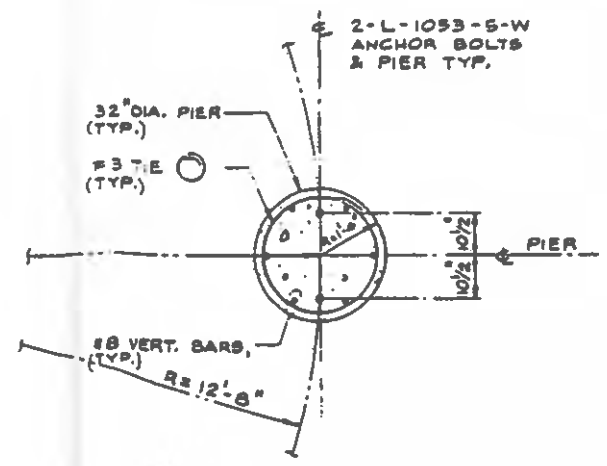


PLAN
3/16"=1'-0"



SECTION A
¼"=1'-0"



DETAIL 1
½"=1'-0"

GENERAL NOTES

1. FOR DESIGN AND CONSTRUCTION NOTES S DWG. 00-A-Q-1.
2. FOR LOCATION SEE PLOT PLAN DWG. 7D-00A-700.

REFERENCE DRAWINGS

PLOT PLAN	7D-00A-70
DESIGN & CONSTRUCTION NOTES	00-A-Q-1
ANCHOR BOLTS	00-D-Q-51

NO.	DATE	REVISIONS	BY	CHK'D	ENGR'G APPR'D	MGR'S APPR'D
0	12/8/89	ISSUED FOR CONSTRUCTION				

SCALE AS SHOWN | DESIGNED P. MEIER | DRAWN R. SANTOS

BECHTEL, INC.
HOUSTON

OXYMAR
VINYL CHLORIDE MONOMER PLANT
CORPUS CHRISTI, TEXAS

FOUNDATION FOR C-720A

AREA DESIGNATION	TYPE	EWR NUMBER	AFE NUMBER

JOB NO.	DRAWING NO.
19611	7D-80-Q-007

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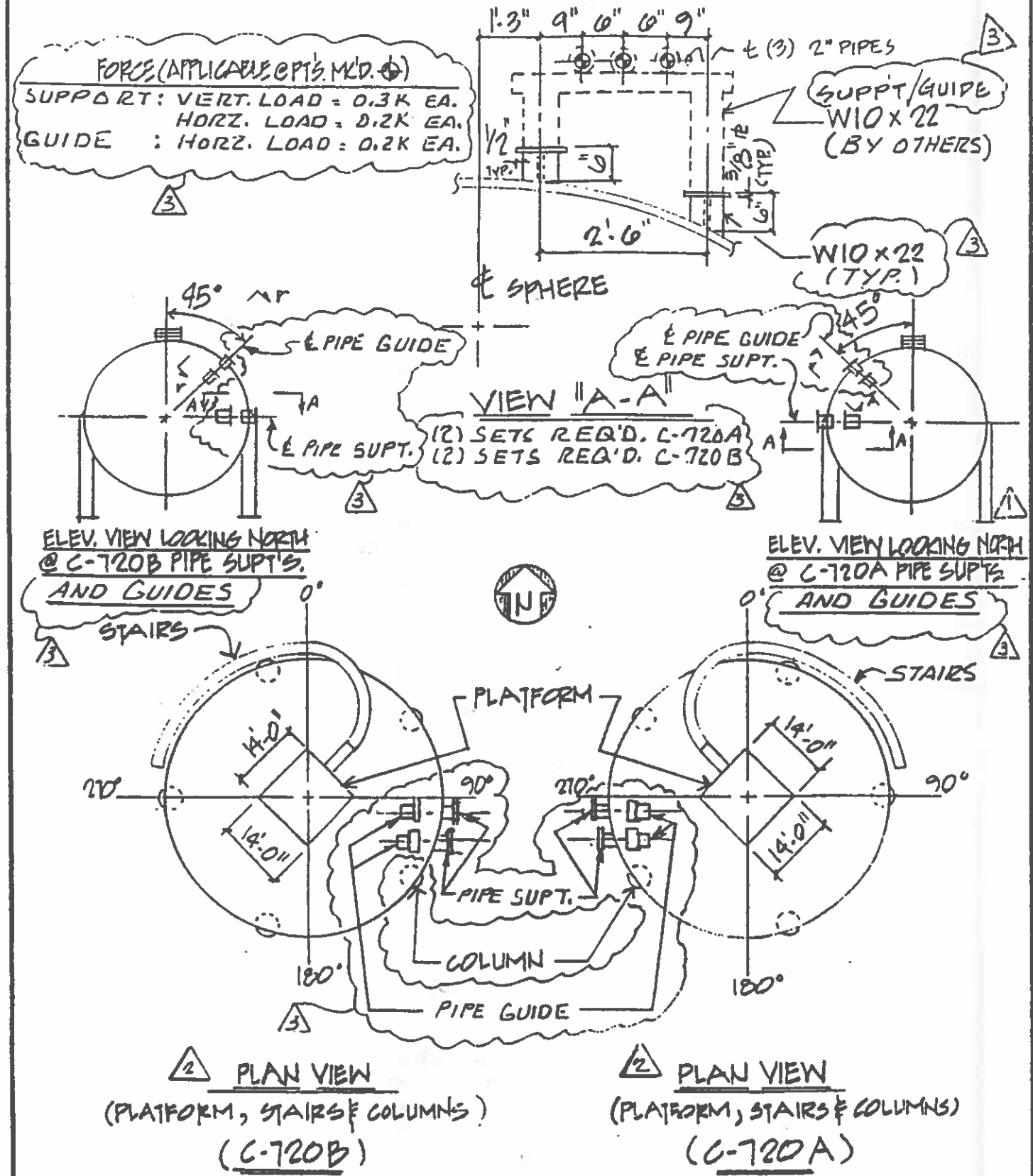
DESIGN REQUIREMENTS -con't-

24. PROVIDE GROUNDING LUGS PER DWG. C-508.
25. STUDS & NUTS TO BE FLUOROCARBON COATED BY STAND-COTE (SC-1) OR LONE STAR SCREW (PCI-3).



2 PLAN VIEW (PLATFORM, STAIRS & COLUMNS) (C-720B)

2 PLAN VIEW (PLATFORM, STAIRS & COLUMNS) (C-720A)

DESIGN REQUIREMENTS

1. ASME Code Section VIII, Division 1, 1986 Edition and Current Addenda.
2. Code Stamp and National Board Registration are Required.
3. Project Spec's.: 19611-A-001, A-002, A-006, A-009, C-002, C-004, W-001, C-509, N-003, X-002, X-004, X-005
4. Material (ASME): Plate SA-516-70 Forging SA-105 Pipe SA-106-B Studs SA-193-B7 Nuts SA-194-2H ‡ Gasket 1/16" GARLOCK 8748 ‡ SEE NOTE 25.
5. Pressure @ Temperature:

	VESSEL				JACKET			
Internal Design:	15	PSIG @	200	°F	N/A	PSIG @	N/A	
External Design:	N/A	PSI @	N/A	°F	N/A	PSI @	N/A	
Normal Operating:	10	PSIG @	170	°F	N/A	PSIG @	N/A	

6. Minimum Design Metal Temperature 20 °F @ 15 PSIG
7. Corrosion Allowance:

	VESSEL		JACKET	
Pressure Parts:	1/8	Inches	N/A	Inche
Internals (removable):	NONE	Inches	N/A	Inche
Internals (fixed):	NONE	(Total) Inches	N/A	(Total) Inche

8. Process Fluid: S.G. 1.30 Contaminants NONE
9. Service: Lethal NO Cyclic NO
10. RT Per Code & Specs, SPOT Minimum. PWHT Per Code & Spec's
11. NDE (UT, MT, PT) Per Code & Spec's Impact Testing Per Code & Spec's
12. Site Design: Wind Per SPEC. A-002 Seismic NOT REQ'D. FOR THIS PROJECT
13. Surface Prep and Paint: Exterior REQ'D Per Spec X-002 & X-004 Interior SANDBLAST SSPC-SP
14. Insulation: NONE Per Spec N/A (By Others), Supports NONE Per N/A
15. Fireproofing: LEGS Per Spec N-003 (By Others), Supports REQ'D Per Dwg. B-N-501
16. Removable Internals: NONE
17. Weights: Vessel (empty) * + Removable Internals * = Operating (NLL) * Test (Full) * * = By Seller
18. Bolt Holes Straddle Vessel ℄'s.
19. Tray Elevations are to Top of Tray Support.
20. Fabrication Details Per Std. Dwg's. on C-500 Index.
21. Manway Covers Shall be Provided with Hinges and Handle Per Std. Dwg. C-537.
22. Nozzle Projections from Inside of Shell to Flange Face Shall be 8" for Size 3" and Less and 10" for Size 4" and Greater unless specified otherwise on the Data Sheet.
23. STAIRWAY, PLATFORM, & HANDRAIL SHALL BE GALVANIZED PER SPEC X-00

No.	Date	Description	By	CK	Mech	Proc Engr	Piping Engr	Oxy
3	12/14/89	REV. AS NOTED ISSUED FOR CONST.	JD	HN/AM 12/13				
2	10/25/89	ISSUED FOR CONST						
1	7/3/89	REVISED NOTE 12, NOZZLE SCH & ELEV. AS NOTED	RD					
0	3/17/89	ISSUED FOR SUB-CONTRACT						

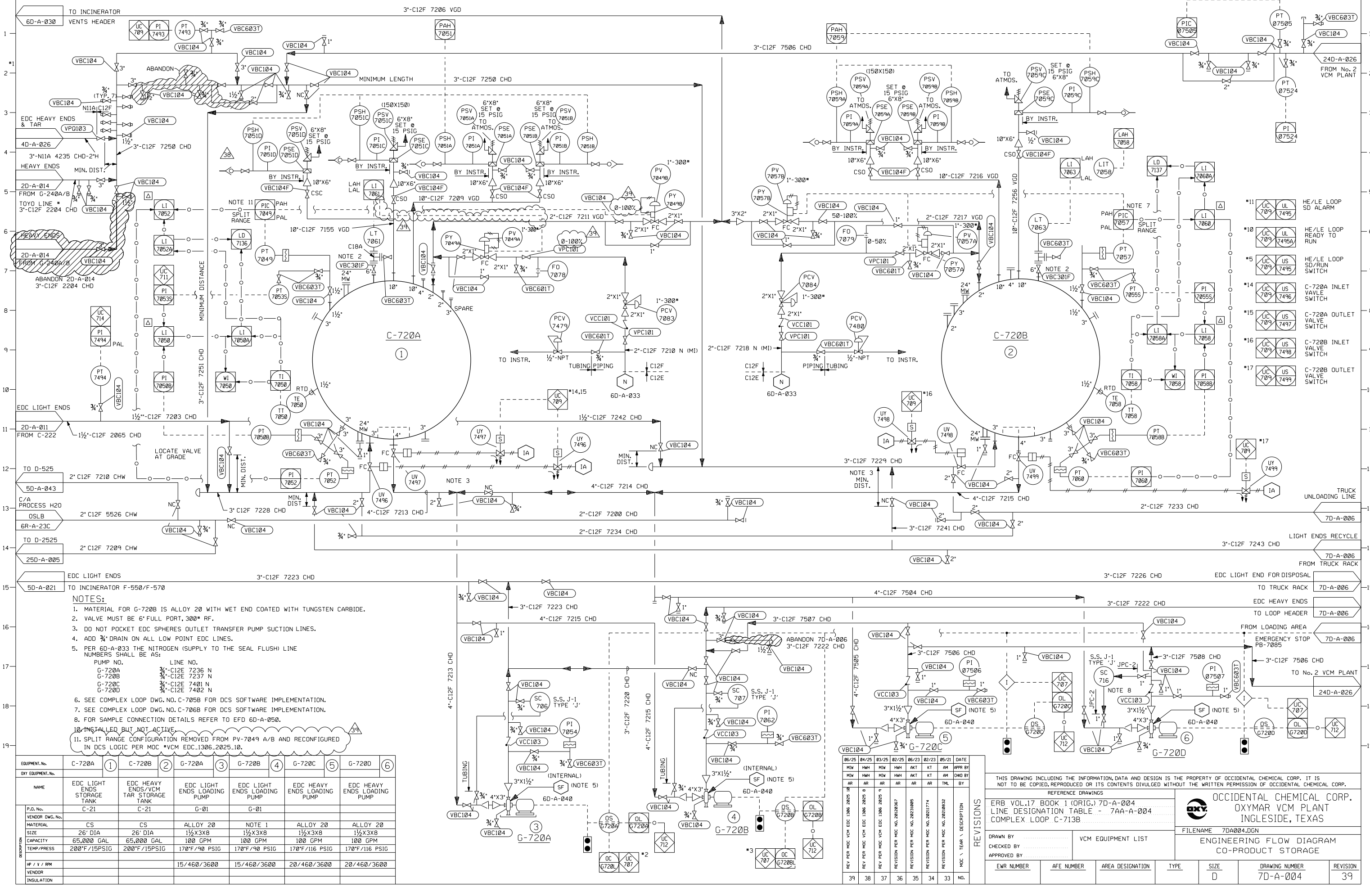
Revisions

BECHTEL, INC.
HOUSTON

OCCIDENTAL CHEMICAL CORP
VCM PLANT
CORPUS CHRISTI, TEXAS

Service: EDC LIGHT ENDS AND EDC HEAVY ENDS/VCM TAR STORAGE TANKS
Equip. No.: C-720A/B Qty. Req'd.: TWO

Job No.	Drawing No.
19611	DS-C-720


TO INCINERATOR VENTS HEADER 6D-A-030
3"-C12F 7206 VGD
3"-C12F 7506 CHD
3"-C12F 7250 CHD
3"-C12F 7251 CHD
3"-C12F 7203 CHD
3"-C12F 7223 CHD
3"-C12F 7226 CHD
3"-C12F 7228 CHD
3"-C12F 7241 CHD
3"-C12F 7243 CHD
3"-C12F 7507 CHD
3"-C12F 7506 CHD
3"-C12F 7508 CHD
10"-C12F 7209 VGD
10"-C12F 7155 VGD
10"-C12F 7216 VGD
10"-C12F 7256 VGD
2"-C12F 7211 VGD
2"-C12F 7217 VGD
2"-C12F 7218 N (MI)
2"-C12F 7210 N (MI)
1½"-C12F 7242 CHD
4"-C12F 7214 CHD
4"-C12F 7213 CHD
4"-C12F 7200 CHD
4"-C12F 7215 CHD
4"-C12F 7504 CHD
4"-C12F 7505 CHD
3"-C12F 7229 CHD
3"-C12F 7233 CHD
3"-C12F 7234 CHD
3"-C12F 7222 CHD
3"-C12F 7223 CHD
3"-C12F 7220 CHD
3"-C12F 7215 CHD
3"-C12F 7213 CHD
3"-C12F 7207 CHD
3"-C12F 7222 CHD
3"-C12F 7226 CHD
3"-C12F 7506 CHD
3"-C12F 7508 CHD
C-720A
C-720B
G-720A
G-720B
G-720C
G-720D
ABANDON 2D-A-014 3"-C12F 2204 CHD
ABANDON 7D-A-006 3"-C12F 7222 CHD
EDC HEAVY ENDS & TAR
4D-A-026
3"-N11A 4235 CHD-2"H
HEAVY ENDS
2D-A-014
FROM G-240A/B
TOYO LINE # 3"-C12F 2204 CHD
EDC LIGHT ENDS
2D-A-011
FROM C-222
1½"-C12F 2065 CHD
TO D-525
5D-A-043
2" C12F 7210 CHW
C/A PROCESS H2O
OSLB
6R-A-23C
2" C12F 5526 CHW
TO D-2525
25D-A-005
2" C12F 7209 CHW
EDC LIGHT ENDS
5D-A-021
TO INCINERATOR F-550/F-570
24D-A-026
FROM No. 2 VCM PLANT
TRUCK UNLOADING LINE
7D-A-006
LIGHT ENDS RECYCLE
FROM TRUCK RACK
EDC LIGHT END FOR DISPOSAL
TO TRUCK RACK 7D-A-006
EDC HEAVY ENDS
TO LOOP HEADER 7D-A-006
FROM LOADING AREA
EMERGENCY STOP PB-7085
TO No. 2 VCM PLANT
LOCATE VALVE AT GRADE
MINIMUM LENGTH
MINIMUM DISTANCE
MIN. DIST.
BY INSTR.
TO INSTR.
TUBING PIPING
PIPING TUBING
SPARE
ABANDON
NOTE 2
NOTE 3
NOTE 7
NOTE 8
SPLIT RANGE
(INTERNAL)
(NOTE 5)
(150X150)
6"X8" SET @ 15 PSIG
TO ATMOS.
10"X6" CSO
VBC104
VBC104F
VBC603T
VBC601T
VBC301F
VPC101
VCC101
VCC103
6D-A-040
6D-A-033
S.S. J-1 TYPE 'J'
JPC-2
24" MW
NC
RTD
PAL
PAH
LAH
LAL
FC
SF
OS
OL
UC
IA
S
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TT
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WI
LI
LIT
LD
LAH
PT
PI
PIC
PSV
PSH
PSE
PV
PCV
FO
SC
UY
UC
UL
US
LT
LAL
7049
7050
7051
7052
7053
7054
7058
7060
7062
7063
7057
7058A
7058B
7060A
7060B
7137
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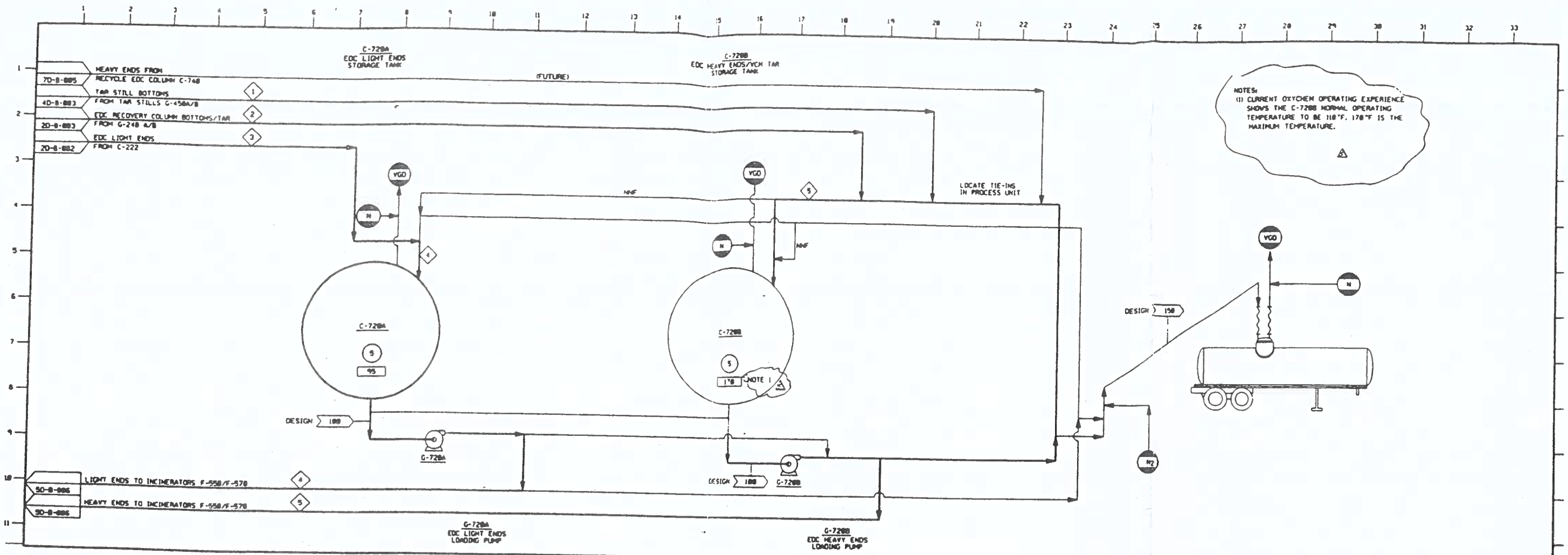

MATERIAL	MOL. WT.	FLOW, LBS/HR 1	2	3	4	5
EDC	98.96	186	257.38	1426.63	1426.63	363.3
$C_2H_2Cl_4$	167.85	339.7	181.78			441.46
$C_4H_6Cl_2$	127.82	194.8	395.86			589.86
$C_4H_5Cl_3$	159.44	66.3				66.3
HCl	36.46			2.11	2.11	
C_2H_4	28.86			6.56	6.56	
C_2H_3Cl	64.5			29.94	29.94	
C_4H_6Cl	88.54			398.16	398.16	
C_2HCl_3	131.4			1.45	1.45	
$C_2H_2Cl_2$ - TRANS	96.94			22.49	22.49	
$CHCl_2OH_3$	98.96			85.64	85.64	
$CHCl_3$	119.4			428.38	428.38	
CCl_2OH_3	133.4		319.68	19.35	19.35	319.68
CCl_2OH_2	98.94			9.58	9.58	
$C_2H_2Cl_2$ - CIS	96.94			29.66	29.66	
CCl_4	153.8			26.92	26.92	
C_2Cl_4	165.82		35.49			35.49
$CHCl_2OH_2Cl$	133.4					
$C_2H_2Cl_4$	167.85					
CH_2ClCH_2OH	80.52		5.48			5.48
TEMPERATURE °F		275	190	95	95	170
PRESSURE - PSIA						
DENSITY - LBS./CU.FT.		91.184	75.1	74.92	74.92	
VISCOSITY - C.P.		1	0.9	0.995	0.994	
AVER.MOL.WT.		148.14	123.51	99.12	99.12	129.74
FLOW - GPM		1	2	4	4	
SCFM 60°F & 1 ATMOS						
ACFM						
TOTAL LB/HR		786	1115.49	2486.79	2486.79	1821.49

HEAT EXCHANGER
THEO.DUTY - BTU/HR.
DESIGN DUTY
M.T.D. = °F.
AREA = $FT.^2$
U BTU/HR. - $FT.^2$-°F.
U BTU/HR. - $FT.^2$-°F.
FOULING FACTOR

LEGEND
- STREAM NUMBER
- GPM
- POUNDS/HR.
- SCFM
- TEMPERATURE °F
- PSIG

MATERIAL BALANCE FIGURES IN ____ PER ____ WITH DESIGN CAPACITY OF ____ / ____ AT ____ HOURS/ ____

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NO.	REVISIONS	DRAWN	CHECK.	APP.	DATE
5	REVISED AS CLOUDED	MM	PG		10-12-88
4	1.1 BILLION LB/YR DESIGN BASIS	MM	PG	DRDB	9/5/89
3	FOR DESIGN		PG	JCB	01/25/89
2	FOR ESTIMATE		PG	BB	11/11/88
1	ISSUE FOR OXY CONCEPT APPROVAL	B.B.		S.S.	

DRAWN BY BABEEBE DATE 8-22-88
PROCESS ENGR. ____
PROCESS ENGR. ____
PROJECT APP. ____

OXYMAR
CORPUS CHRISTI VCM PLANT
INGLESIDE, TEXAS

BECHTEL JOB NO. 19611 | DWG 70-8-003 SHT.

SCALE NONE

VCM PLANT PROCESS FLOW DIAGRAM
CO-PRODUCT STORAGE

REV. 5

08337GDGALP19 (1881.42)
DATE 10-10-88

Appendix B

Integrity Assessment Report

OCCIDENTAL CHEMICAL CORPORATION
OCCIDENTAL CHEMICAL INGLESIDE, TEXAS PLANT
ASSESSMENT AND CERTIFICATION
OF NEW HAZARDOUS WASTE TANKS
C-720A AND C-720B

MARCH, 1991

DC910019
JN04049402

JONES AND NEUSE, INC.
Environmental Engineering Consultants

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and
Occidental Chemical Corporation

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2.0 ASSESSMENT METHODOLOGY	2
2.1 DESIGN STANDARDS	
2.2 WASTE CHARACTERISTICS	
2.3 CORROSION PROTECTION	
2.4 DOCUMENTED AGE	
2.5 TANK FOUNDATION	
2.6 SECONDARY CONTAINMENT	
3.0 INSPECTION	4
3.1 GENERAL	
3.2 INSPECTION	
3.3 TIGHTNESS TESTING	
4.0 CERTIFICATION	6

APPENDICES

A MANUFACTURER'S CERTIFICATION AND TANK DRAWINGS
B SECONDARY CONTAINMENT CALCULATIONS
C TIGHTNESS TESTING RESULTS

SECTION 1.0
INTRODUCTION

1.0 INTRODUCTION

EPA regulations published in July, 1986 state that owners or operators of new tank systems or components must obtain and submit the Regional Administration at time of submittal of Part B information, a written assessment, reviewed and certified by an independent, qualified, registered, professional engineer, attesting that the tank system has sufficient structural integrity and is acceptable for the storing and treating of hazardous wastes. Specifically, 40 CFR 264.192 delineates the considerations for attesting to the tank system's integrity. In general, this regulation requires the assessment to show that the foundation, structural support, seams, connections, and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength, compatibility with the wastes, to be stored or treated, and corrosion protection to insure that it will not collapse, rupture, or fail.

Accordingly, Jones and Neuse, Inc. (JN) conducted the tank assessment described herein for the new hazardous waste tanks to be placed in service at the OxyChem Facility located in Ingleside, Texas. The tanks are to be used for collecting and storing hazardous wastes prior to treatment or off-site disposal.

SECTION 2.0
ASSESSMENT METHODOLOGY

2.0 ASSESSMENT METHODOLOGY

2.1 Design Standards

The new hazardous waste tanks (C-720A and C-720B) are elevated 26-foot inside diameter welded steel spheres with capacities of 65,000 gallons each. The wall thicknesses range from 0.366 to 0.551 inches with a design corrosion allowance of 0.125 inches. The shell material is SA516-70. The tanks are pressure vessels with a design pressure of 15 psi at 200°F. Each tank is supported with five legs (15.5 ID steel columns) welded at the equator and secured with anchor belts to concrete support pads.

Both tanks were designed and constructed in accordance with ASME Rules Section VIII Division 1 1986 Edition (1987 Addendum). The manufacturer's certifications are included as Appendix A of this report. Tank drawings are also included in Attachment A.

2.2 Waste Characteristics

The wastes to be stored in the new tanks are ethylene dichloride (EDC) heavy ends (K019) and vinyl chloride monomer heavy ends (K020). The wastes are considered compatible with steel.

2.3 Corrosion Protection

The new tanks are elevated, therefore, the provisions of 40 CFR 264.192 (a) (3) and (4) do not apply. All exterior surfaces including the support system have been painted with epoxy primer and a polyurethane finish coat.

2.4 Documented Age

According to the manufacturer's certification, both tanks were constructed in May of 1990.

2.5 Tank Foundation

The foundation system is presented in Bechtel Drawing No. 7D 80-Q-007. The foundation system is adequate to maintain the load of the tank when full.

2.6 Secondary Containment

40 CFR 264.193 presents the requirements for secondary containment for new tank systems. The following information is applicable to the secondary containment requirements of the regulations.

- The impoundment dike is designed to contain 100% of the capacity of the largest tank. In addition, the dike has sufficient capacity to contain precipitation from a 25 yr. - 24 hr. rainfall event (8.8") (see Appendix B for calculations).

- Chemically resistant water stops were used at all construction joints.

- The impoundment has been provided with an impermeable interior coating that will prevent migration of waste into the concrete in the event there is a spill or release.

- The bottom slab of the impoundment is sloped to drain to facilitate removal of liquids resulting from leaks, spills, or precipitation.

- It is Jones and Neuse, Inc.'s understanding that OxyChem will inspect the system daily for the presence of any release of hazardous waste or accumulated liquid.

SECTION 3.0
INSPECTION

3.0 INSPECTION

3.1 General

EPA regulations (40CFR 264.192(b)) require that in order to ensure proper handling procedures are adhered to during installation, prior to covering, enclosing, or placing a new tank system or component in use, an independent, qualified, registered professional engineer must inspect the system for the presence of any of the following:

- weld breaks
- punctures
- scrapes of protective coatings
- cracks
- corrosion
- other structural damage or inadequate construction/ installation

In addition, 40 CRF 264.192 (d) requires that all new tanks and ancillary equipment be tested for tightness prior to being covered, enclosed, or placed in use.

3.2 Inspection

On January 4, 1991 Mr. Don Nelson of JN inspected the tank systems as required by the regulations. All components of the tank systems were in good condition with no cracks, corrosion, punctures, scrapes of protective coating or other damage.

At the time of this inspection, the impermeable coating had not been applied to the secondary containment structure. On February 15, 1991 the secondary containment system was inspected. The impermeable coating had been applied however, small holes in the protective coating were noted at construction joints at four locations.

On March 27, 1991 the repairs to the protective coating were inspected. The areas had been repaired satisfactorily.

3.3 Tightness Testing

As required by 40 CFR 264.192 (b) the tank systems were pressure tested for tightness prior to being placed in service. The testing indicated the systems are tight. The results are included as Attachment C.

SECTION 4.0
CERTIFICATION

4.0 CERTIFICATION

Based upon the assessment methodology described herein (JN Document DC910019) and subject to limitations of that methodology I have determined that:

1. The tank systems referred to as Hazardous Waste Tanks C-720A and C-720B located at the Occidental Chemical Corporation facility in Ingleside, Texas are not subject to cracks, leaks, or corrosion that affect the performance of the tanks, are not leaking or unfit for use, and

2. The tank systems are adequately designed and have sufficient structural strength and compatibility with the stored wastes to ensure that they will not collapse, rupture, or fail.

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 persons or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to be the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Donald W. Nelson

Donald W. Nelson, P.E.

APPENDIX A
MANUFACTURE'S CERTIFICATION
AND
TANK DRAWINGS

FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS

As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

MADE: JJJ 2/20/90
CHKD: MC 3/28/90

1. ...ufactured and certified by CBI Na-Con, Inc.; 8900 Fairbanks N. Houston Rd.; Houston, TX Contract S90515-4
(Name and address of manufacturer)

2. ...manufactured for Bechtel Corporation; Houston, TX Vessel #C-720A
(Name and address of purchaser)

3. Location of installation Occidental Chemical Corp.; Oxychem VCM Plant; Corpus Christi, TX
(Name and address)

4. Type Sphere | S90515-4-1 (Major's serial no.) | ------- (CRN) | 1 (Rev 0) (Drawing) | 106 (Nat'l. Bd. no.) | 1990 (Year built)
(Horiz. or vert., tank)

5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME Boiler and Pressure Vessel Code. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 1986 Ed.
Year

1987 (Addenda date) | ---------- (Code Case no.) | ---------- (Special service per UG-120(e))

...ms 6-11 incl. to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers

6. Shell: SA516-70 (Matl. [Spec. No., Grade]) | 0.366-0.551 (Nom. Thk. [in.]) | 0.125 (Corr. Allow. [in.]) | 26'-0 (Diam. I.D. [ft & in.]) | ---------- (Length [Overall] [ft & in.])

7. Seams: Double Butt Welded (Long. [Dbl., Sngl.]) | Spot (RT 3) (R.T. [Spot or Full]) | E5 (Eff. [%]) | ---------- (H.T. Temp. [°F])

---------- (Type) | ---------- (Girth [Dbl., Sngl.]) | ---------- (R.T. [Spot, Partial, or Full]) | ---------- (No. of Courses)

8. Heads: (a) Matl. ---------- (Spec. No., Grade) (b) Matl. ---------- (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------
	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------

...movable, bolts used (describe other fastenings) ----------
(Matl., Spec. No., Gr., Size, No.)

9. Type of Jacket ---------- Proof Test ----------

10. Jacket Closure ---------- If bar, give dimensions ---------- If bolted, describe or sketch.
(Describe as welded, bar, etc.)

11. MAWP 15 psi at max. temp. 200 °F. Min. design metal temp. 20 °F at 15 psi.
Hydro., Field test press. 23.0 psig @ Top.

...ms 12 and 13 to be completed for tube sections

12. Tubesheets: ---------- (Stationary Matl. [Spec. No., Gr.]) | ---------- (Diam. [in.] [Subject to pressure]) | ---------- (Nom. Thk. [in.]) | ---------- (Corr. Allow. [in.]) | ---------- (Attach. [Welded, Bolted])

---------- (Floating Matl. [Spec. No., Gr.]) | ---------- (Diam. [in.]) | ---------- (Nom. Thk. [in.]) | ---------- (Corr. Allow. [in.]) | ---------- (Attach.)

13. Tubes: ---------- (Matl. [Spec. No., Gr.]) | ---------- (O.D. [in.]) | ---------- (Nom. Thk. [in. or Gauge]) | ------- (Number) | ---------- (Type [Straight or "U"])

...ms 14-17 incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers

14. Shell: ---------- (Matl. [Spec. No., Grade]) | ---------- (Nom. Thk. [in.]) | ---------- (Corr. Allow. [in.]) | ---------- (Diam. I.D. [ft & in.]) | ---------- (Length [Overall] [ft & in.])

15. Seams: ---------- (Long. [Dbl., Sngl.]) | ---------- (R.T. [Spot or Full]) | ---------- (Eff. [%]) | ---------- (H.T. Temp. [°F])

---------- (Type) | ---------- (Girth [Dbl., Sngl.]) | ---------- (R.T. [Spot, Partial, or Full]) | ---------- (No. of Courses)

16. Heads: (a) Matl. ---------- (Spec. No., Grade) (b) Matl. ---------- (Spec. No., Grade)

	...tion (Top, ...om, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------
	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------

If removable, bolts used (describe other fastenings) ----------
(Matl., Spec. No., Gr., Size, No.)

17. MAWP ---------- psi at max. temp. ---------- °F. Min. design metal temp. ---------- °F at ------ psi.
Hydro., pneu., or comb. test press. ----------

FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS

As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

MADE: JJJ 2/20/90
CHKD: MC 3/28/90

1. Manufactured and certified by CBI Na-Con, Inc.; 8900 Fairbanks N. Houston Rd.; Houston, TX (Name and address of manufacturer) Contract S90515-4

2. Manufactured for Bechtel Corporation; Houston, TX (Name and address of purchaser) Vessel #C-720B

3. Location of installation Occidental Chemical Corp.; Oxychem VCM Plant; Corpus Christi, TX (Name and address)

4. Type Sphere (Horiz. or vert., cone) | S90515-4-2 (Builder's serial No.) | --- (CRN) | 1(Rev 0) (Drawing) | 107 (Nat'l. Bd. No.) | 1990 (Year built)

5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME Boiler and Pressure Vessel Code. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 1986 Ed. (Year)

1987 (Addenda date) | --- (Code Case No.) | --- (Special service per UG-120(d))

Items 6-11 incl. to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers

6. Shell: SA516-70 (Matl. Spec. No., Grade) | 0.366-0.551 (Nom. Thk., in.) | 0.125 (Corr. Allow., in.) | 26'-0 (Diam. I.D. (ft & in.)) | --- (Length (Overall) (ft & in.))

7. Seams: Double Butt Welded (Long. (Dbl., Sgl.)) | Spot (RT 3) (R.T. (Spot or Full)) | 85 (Eff. (%)) | --- (H.T. Temp. (°F))

--- (Type) | --- (Circ. (Dbl., Sgl.)) | --- (R.T. (Spot, Panel, or Full)) | --- (No. of Courses)

8. Heads: (a) Matl. --- (Spec. No., Grade) (b) Matl. --- (Spec. No., Grade)

Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---

If removable, bolts used (describe other fastenings) --- (Matl., Spec. No., Gr., Size, No.)

9. Type of Jacket --- Proof Test ---

10. Jacket Closure --- (Describe as ogee & weld, bar, etc.) If bar, give dimensions --- If bolted, describe or sketch.

11. MAWP 15 psi at max. temp. 200 °F. Min. design metal temp. 20 °F at 15 psi.
Hydro.. Field test press. 23.0 psig @ Top.

Items 12 and 13 to be completed for tube sections

12. Tubesheets: --- (Stationary Matl. (Spec. No., Gr.)) | --- (Diam. (in.) (Subject to pressure)) | --- (Nom. Thk. (in.)) | --- (Corr. Allow. (in.)) | --- (Attach. (Welded, Bolted))

--- (Floating Matl. (Spec. No., Gr.)) | --- (Diam. (in.)) | --- (Nom. Thk. (in.)) | --- (Corr. Allow. (in.)) | --- (Attach)

13. Tubes: --- (Matl. (Spec. No., Gr.)) | --- (O.D. (in.)) | --- (Nom. Thk. (in. or Gauge)) | --- (Number) | --- (Type (Straight or "U"))

Items 14-17 incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers

14. Shell: --- (Matl. (Spec. No., Grade)) | --- (Nom. Thk. (in.)) | --- (Corr. Allow. (in.)) | --- (Diam I.D. (ft & in.)) | --- (Length (Overall) (ft & in.))

15. Seams: --- (Long. (Dbl., Sgl.)) | --- (R.T. (Spot or Full)) | --- (Eff. (%)) | --- (H.T. Temp. (°F))

--- (Type) | --- (Circ. (Dbl., Sgl.)) | --- (R.T. (Spot, Panel, or Full)) | --- (No. of Courses)

16. Heads: (a) Matl. --- (Spec. No., Grade) (b) Matl. --- (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	---	---	---	---	---	---	---	---	---	---
(b)	---	---	---	---	---	---	---	---	---	---

If removable, bolts used (describe other fastenings) --- (Matl., Spec. No., Gr., Size, No.)

--- --- --- --

Form U-1 (Back)

Nozzles, Inspection and Safety Valve Openings:

Mark (Nozzles, Manh., etc.)	No.	Diam. or Size	Type	Matl.	Nom. Thk.	Reinforcement Matl.	How Attached	Location
SEE ATTACHED SUPPLEMENTARY SHEET "FORM-U4" FOR SHOP INSTALLED NOZZLES.								

19. Supports: Skirt No (Yes or No) Lugs --- (No.) Legs 5 (No.) Other 15" ID Columns (Describe) Attached Welded @ Equator (Where and How)

20. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: Design Vacuum: 0.25 PSIG Product: EDC Ends/VCM Tar @ 81 12 prf (Name of part, item number, mfg's name and identifying stamp)

Head plates with nozzles attached to be shop PWHT per Manufacturer's requirements.

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1.

"U" Certificate of Authorization No. 20,126 expires April 20, 1993 FAD 5-22-90

Date 5-4-90 Co. name CBI Na-Con, Inc. (Manufacturer) Signed Mark Wood (Representative)

CERTIFICATE OF SHOP INSPECTION

Vessel constructed by CBI Na-Con, Inc. at Houston, Texas

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of TEXAS and employed by H.S.B.I. & I. Co. of Hartford, Connecticut have inspected the pressure vessel described in this Manufacturer's Data Report on 5-4, 1990, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in the Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 5-4-90 Signed P.L. Hunter (Authorized Inspector) Commissions NB-6954- TEXAS (Nat'l Board, State, Province and No.)

CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE

We certify that the field assembly construction of all parts of this vessel conforms with the requirements of Section VIII, Division 1 of the ASME Boiler and Pressure Vessel Code.

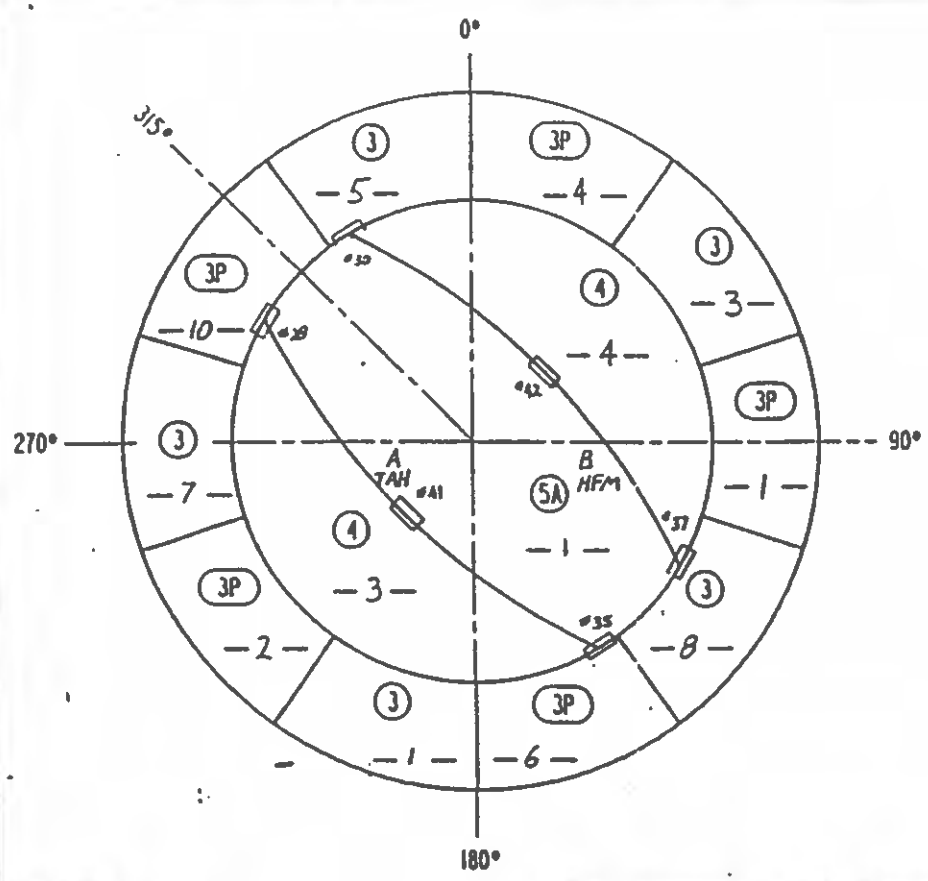
"U" Certificate of Authorization No. 20,126 expires April 20, 1993 FAD 5-22-90

Date 5/20/90 Co. name CBI Na-Con, Inc. (Manufacturer that completed and constructed field assembly) Signed (By Representative)

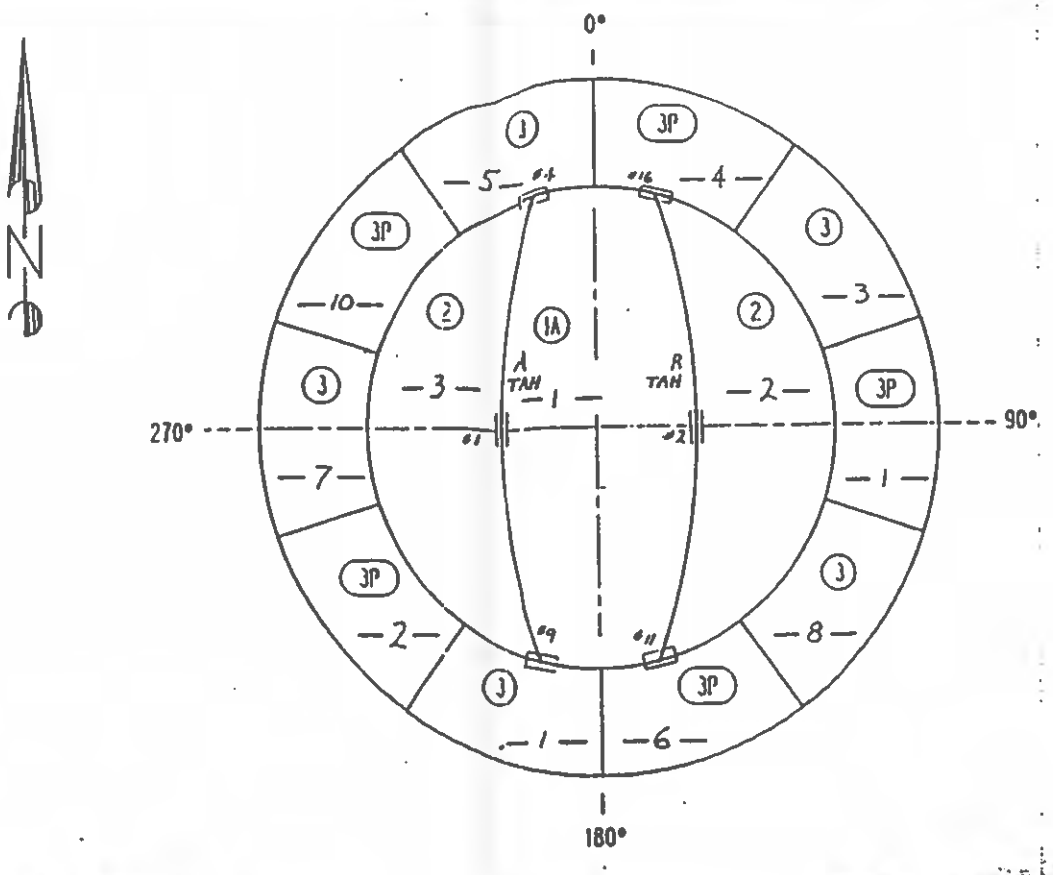
CERTIFICATE OF FIELD ASSEMBLY INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of and employed by H.S.B.I. & I Co. of Hartford, Connecticut have compared the statements in this Manufacturer's Data Report with the described pressure vessel and state that parts referred to as data items 7, 11, & 18, not included in the certificate of shop inspection, have been inspected by me and that, to the best of my knowledge and belief, the Manufacturer has constructed and assembled this pressure vessel in accordance with ASME Code, Section VIII, Division 1. The described vessel was inspected and subjected to a hydrostatic test of 29 psi. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 5-20-90 Signed Frank A. Dowell (Authorized Inspector) Commissions NB 7599-TX 804 (Nat'l Board (incl. endorsements), State, Prov., and No.)



TOP PLAN



DOTTON HEAD PLATES
INSIDE VIEW

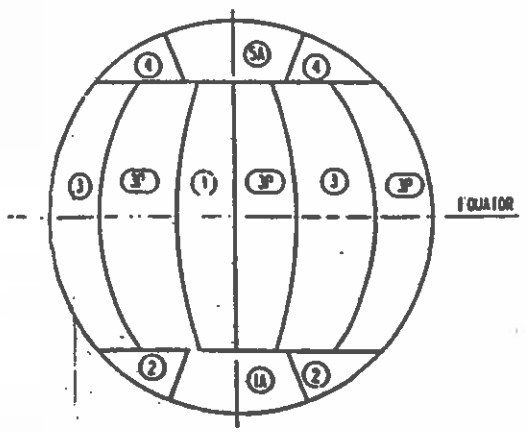
NDE-PERSONNEL MT & PT ONLY		NAME OF WELDER	I.D.
BILLY D CHILDRESS		THOMAS A HERNANDEZ	TAH
WILLIAM H SATTERSFIELD		HOWARD E MINTER	LEM
JOHN D WILLIAMS			
LIST NDE PROCEDURES USED - PT ONLY	SEAM I.D. IF REQ'D		
MT 5Y REV 1	ALL *		
MT 8 REV 2	ALL *		
LIST WELD PROCEDURE	SEAM I.D. IF REQ'D		
GWPS-SMA REV 14	ALL		
WPS E7018	ALL		

FOR AUTHORIZED INSPECTOR ONLY All Syst A.T. welds required to be
Acceptable Syst A.T. required for 12-21-00
Visual only for Hydro S.T.
12/13/00

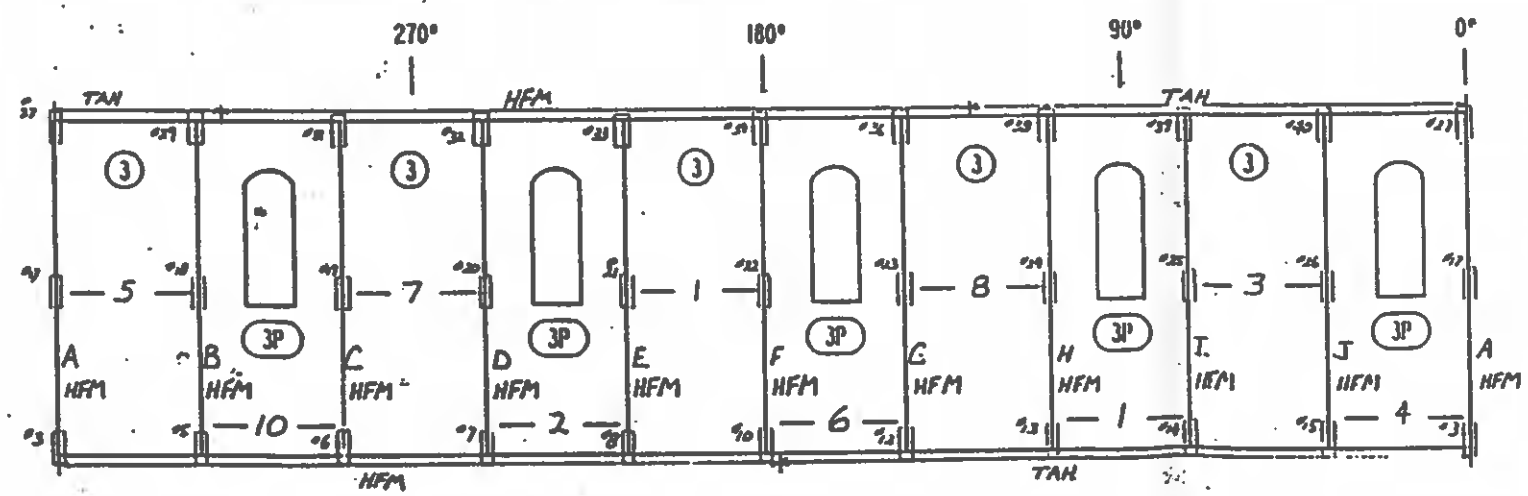
* INCLUDES BACK GOUGED SURFACES

NOTES:

1.) RECORD MATERIAL I.D. FOR EACH PIECE OR ASSEMBLY.
2.) RECORD WELDERS I.D. ON EACH SEAM.
3.) RECORD SEAM I.D. & R.T. INTERVALS (FIRST & LAST FOR 100%) OR LOCATION FOR SPOTS.



ELEVATION

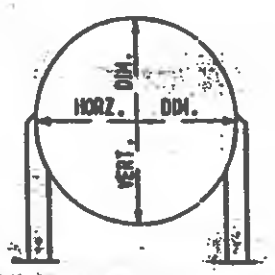


DEVELOPED ELEVATION OF EQUATOR R's

(OUTSIDE VIEW)

VESSEL DIAMETER	
VERTICAL	24'
HORIZONTAL N/S	24'
HORIZONTAL E/W	24'

RECORD VESSEL FINAL AS-BUILT DIMENSIONS



WHEN COMPLETE
FORWARD: SPEC CONSTRUCTION OFFICE ONE LEGIBLE AND WORK COPIES IF ANY
CONSTRUCTION OFFICE: KEEP ONE COPY IN CONSTRUCTION OFFICE FILE
SPEC LEGIBLE COPY TO CERTIFYING ASSOCIATE

I CERTIFY THAT THIS RECORD IS COMPLETE AND ACCURATE IN ACCORDANCE WITH SECTION 5 OF DIVISION 4 OF THE O.C. MANUAL.

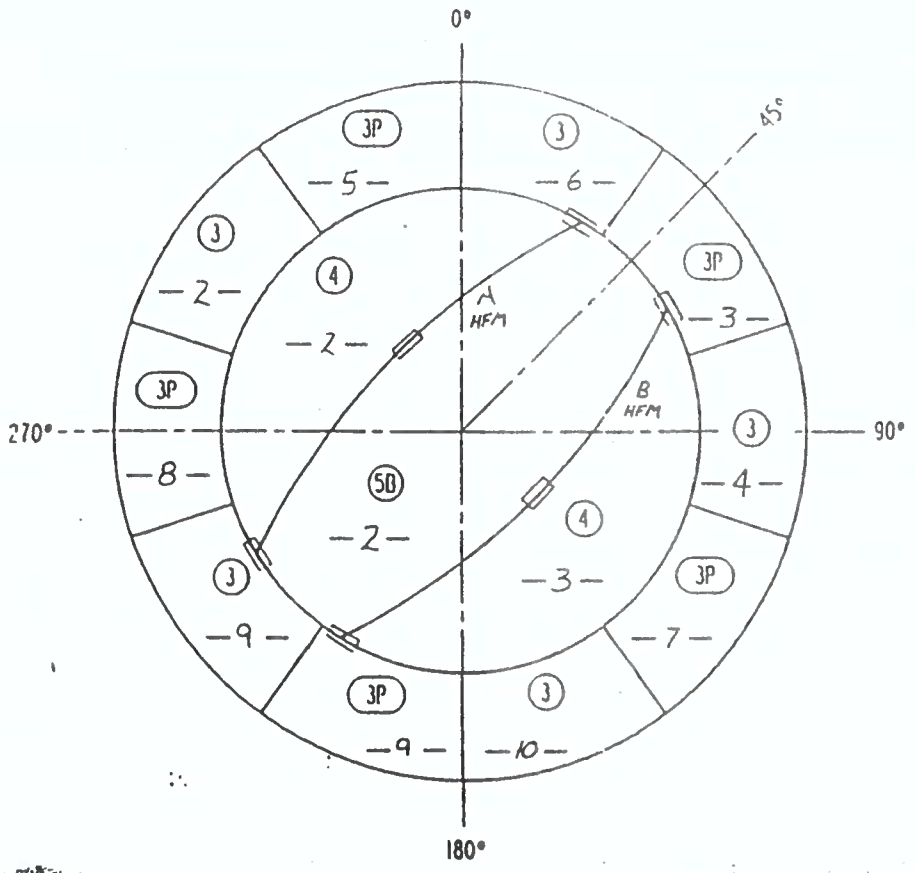
John D. Williams — 5/3/01
ANTHONY G. O.A. SUPERVISOR — DATE

95150481 JDN

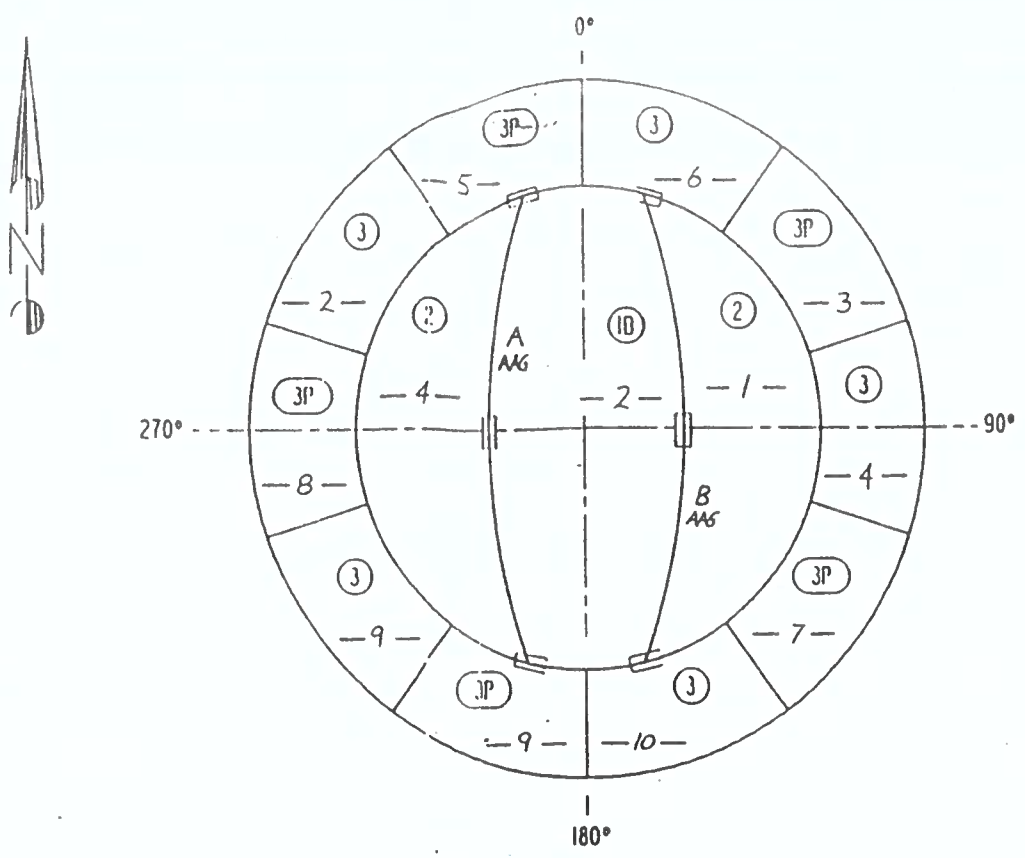
REVISE CHANGE FROM PREVIOUS ISSUE

CBI

RECORD DRAWING



TOP PLAN



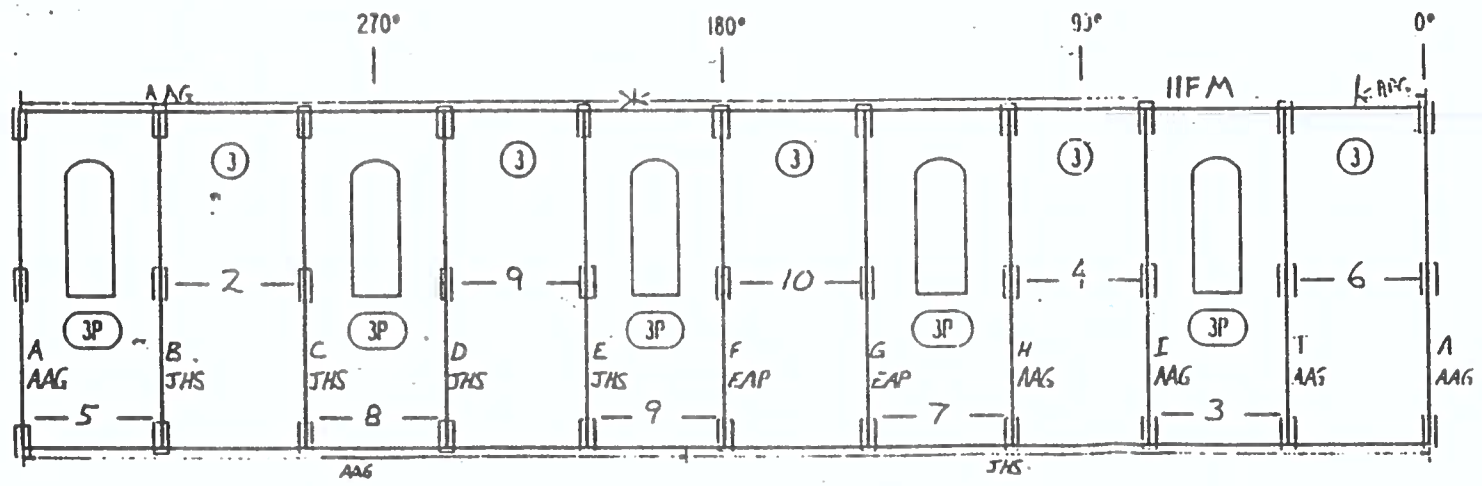
BOTTOM HEAD PLATES
INSIDE VIEW

NDE PERSONNEL MT & PT ONLY		NAME OF WELDER	I.D.
BILLY D CHILDRESS		ANADOE AGUTIERREZ	AAG
WILLIAM H SATTERFIELD		ERNEST A PRICE	EAP
ROYCE E RIDENS		JOSE H SALINAS	JHS
JOHN D WILLIAMS		HOWARD E MINTER	HEM
LIST NDE PROCEDURES USED - PT ONLY	SEAM I.D. IF RT'D		
MT 5Y REV 1	ALL *		
MT 8 REV 2	ALL *		
LIST WELD PROCEDURE	SEAM I.D. IF RT'D		
GWPS-SMA REV 14	ALL		
WPS E7018	ALL		

FOR AUTHORIZED INSPECTOR ONLY, all spot RT will be waived by RT Acceptable R.T. waived 5-13-90 Visual Ready for Hydrotest 5-13-90

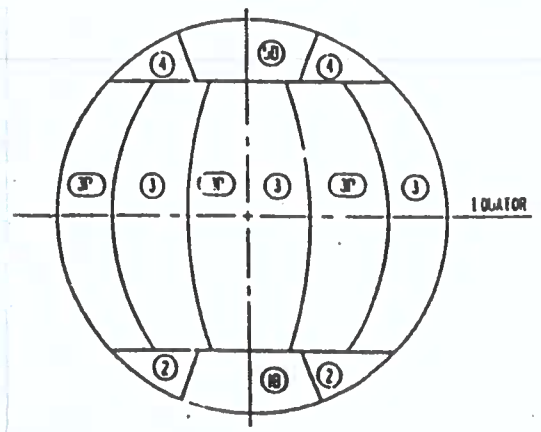
* INCLUDES BACK GOUGED SURFACES

INSTRUCTIONS:
1.) RECORD MATERIAL I.D. FOR EACH PIECE OR ASSEMBLY.
2.) RECORD WELDERS I.D. ON EACH SEAM.
3.) RECORD SEAM I.D. & R.T. INTERVALS (FIRST & LAST FOR 100%) OR LOCATION FOR SPOTS.



DEVELOPED ELEVATION OF EQUATOR ℄'s

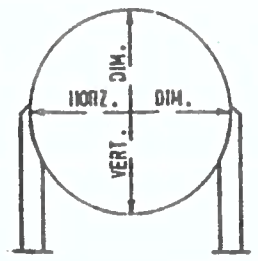
(OUTSIDE VIEW)



ELEVATION

VESSEL DIAMETER	
VERTICAL	26'
HORIZONTAL N/S	26'
HORIZONTAL E/W	26'

RECORD VESSEL FINAL AS-BUILT DIMENSIONS



WHEN COMPLETE
FOREMAN: SEND CONSTRUCTION OFFICE ONE LEGIBLE AND WORK COPIES IF ANY
CONSTRUCTION OFFICE: KEEP ONE COPY IN CONSTRUCTION OFFICE FILE
SEND LEGIBLE COPY TO ENGINEERING ASSIGNED

I CERTIFY THAT THIS RECORD IS COMPLETE AND ACCURATE IN ACCORDANCE WITH SECTION 5 OF DIVISION 4 OF THE O.C. MANUAL.

WELDING & Q.A. SUPERVISOR — DATE 5/7/90

▶ INDICATES CHANGE FROM PREVIOUS ISSUE

CBI

RECORD DRAWING
(1) - 26'- 0 ϕ x 15 PSIG SPHERE
SPHERE °C-1208

Customer's No. 19611-SC-C-21-HAC
By LAH Chkd [illegible] Date 12-19-89
F. S. LIPNICKI
Engineering Supervisor

Contract No. S90515-4
Dwg. R2 Rev. 0
Sheet

THIS DRAWING WAS GIVEN PREPARED FOR AND IS THE PROPERTY OF CBI AND IS TO BE USED ONLY FOR CONSTRUCTION OF EQUIPMENT OR STRUCTURES BY CBI AND IS NOT TO BE USED IN PART FOR ANY OTHER PURPOSE WITHOUT PERMISSION.

95150R2.DGN

APPENDIX B
SECONDARY CONTAINMENT CALCULATIONS

CALCULATION OF CONTAINMENT CAPACITY

Total Volume of Containment

104' x 54' x 3' - 1/2(10'x10'x3') - 1/2(5'x5'x3')
16,848 ft^3 - 150 ft^3 - 37.5 ft^3
16,660.5 ft^3

Net Volume Available for Containment

16,660.5 ft^3 - 18 supports @ 17 ft^3 ea
16,660.5 ft^3 - 306 ft^3 = 16,354.5 ft^3

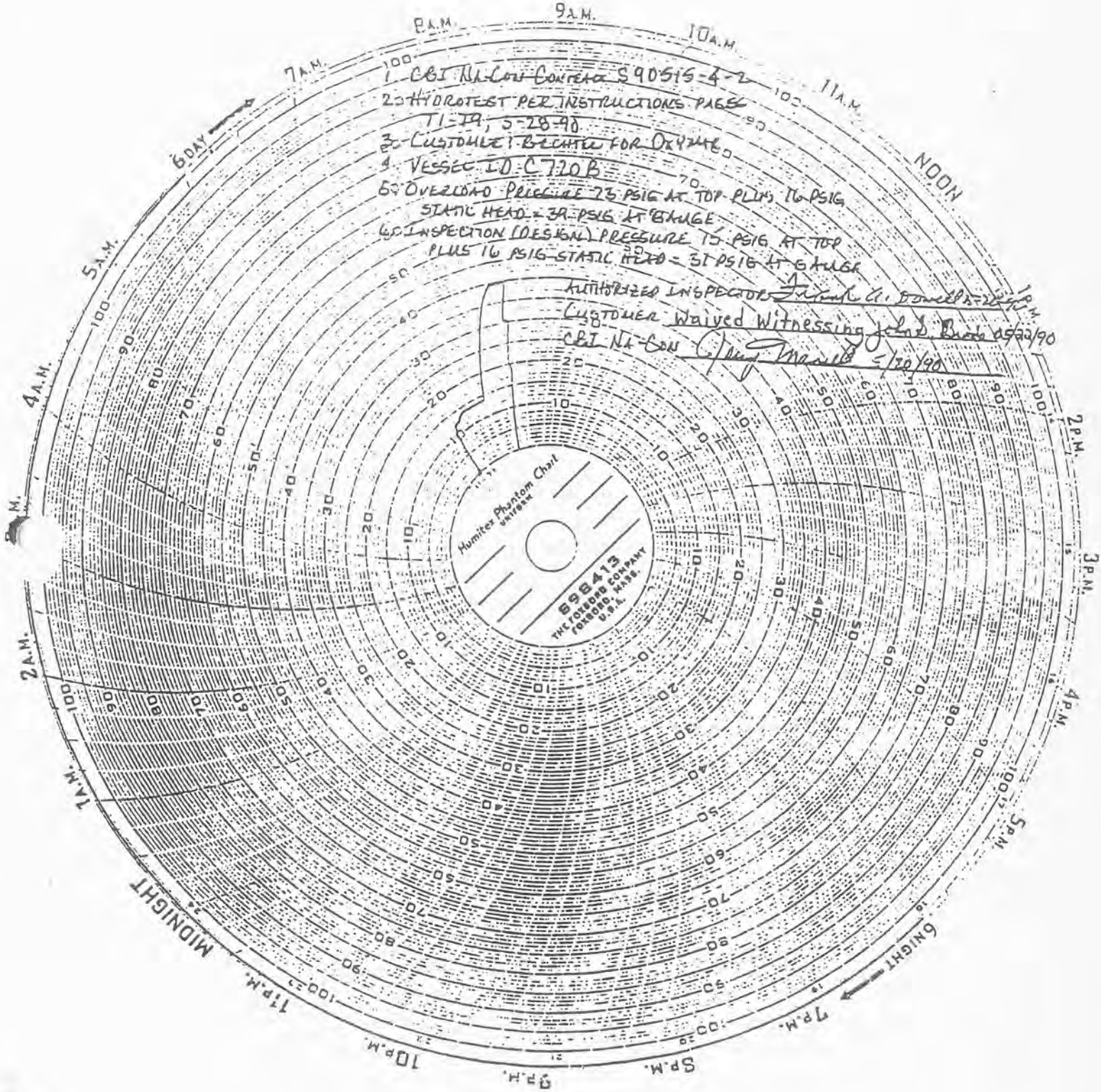
Volume of rainfall associated with 25 years, 24 hr. rainfall event (8.8") From Technical Bulletin No. 40, Weather Bureau.

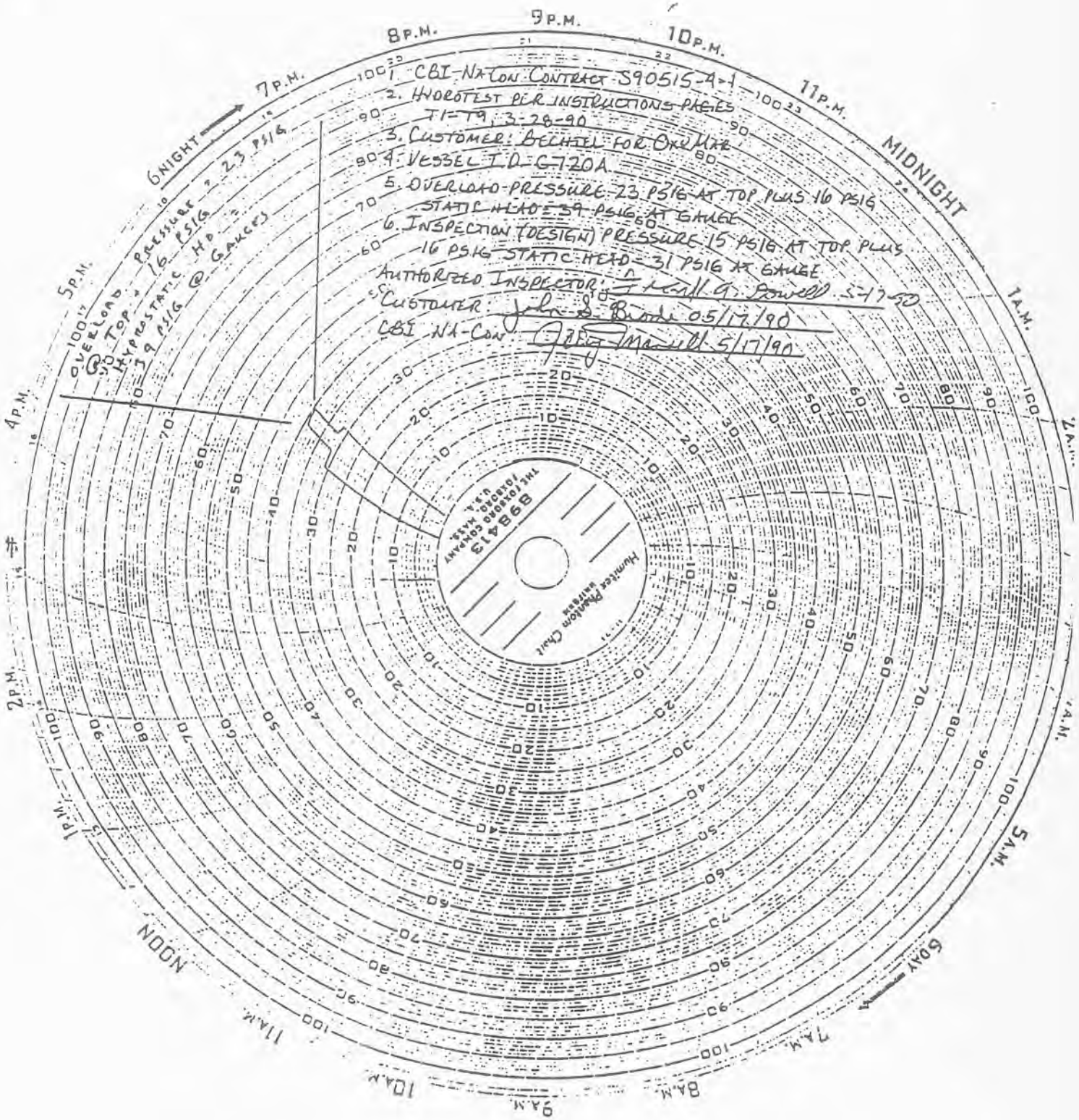
.733' x 5553.5 ft^2 = 4071 ft^3

Net Volume	(16,354.5 ft^3)
- Rainfall Volume	(4071 ft^3)
Remaining Volume	(12,283.5 ft^3)

The remaining volume (12,283.5 ft^3) is greater than 100% of the volume of the largest tank 65,000 gallons or 8690 ft^3.

APPENDIX C
TIGHTNESS TESTING RESULTS


1 CBI NA-CON CONTRACT S90515-4-2
2. HYDROTEST PER INSTRUCTIONS PAGES
T1-T9, 5-28-90
3. CUSTOMER: BECHTEL FOR OXYNOL
4. VESSEL ID: C720B
5. OVERLOAD PRESSURE 23 PSIG AT TOP PLUS 16 PSIG STATIC HEAD = 39 PSIG AT GAUGE
6. INSPECTION (DESIGN) PRESSURE 15 PSIG AT TOP PLUS 16 PSIG STATIC HEAD = 31 PSIG AT GAUGE
AUTHORIZED INSPECTOR [illegible] 5/22/90
CUSTOMER Waived Witnessing John D. Burke 5/22/90
CBI NA-CON Greg Mansell 5/20/90
Humitex Phantom Chart
98413
THE FOXBORO COMPANY
FOXBORO, MASS.
U.S.A.
6 DAY
MIDNIGHT
NOON


1. CBI-NATCON CONTRACT S90515-4-1
2. HYDROTEST PER INSTRUCTIONS PAGES
T1=T9, 3-28-90
3. CUSTOMER: BECHTEL FOR OKEMAH
4. VESSEL I.D. G-720A
5. OVERLOAD PRESSURE 23 PSIG AT TOP PLUS 16 PSIG STATIC HEAD = 39 PSIG AT GAUGE
6. INSPECTION (DESIGN) PRESSURE 15 PSIG AT TOP PLUS 16 PSIG STATIC HEAD = 31 PSIG AT GAUGE
AUTHORIZED INSPECTOR: Harold G. Powell 5-17-90
CUSTOMER: John L. Brooks 05/17/90
CBI NA-CON: Greg Maxwell 5/17/90
OVERLOAD PRESSURE = 23 PSIG
@ TOP = 16 PSIG
HYDROSTATIC HD = 39 PSIG @ GAUGES
TO = 39 PSIG @ GAUGES
MIDNIGHT
NOON
6 NIGHT
6 DAY
Hunter Pemberton Chart
89813
THE FOXBORO COMPANY
FOXBORO MASS.
U.S.A.

Appendix C

Example Daily Inspection Form

Prepared by: Anna Longnecker
Rev./Mod: 08/29/24

Occidental Chemical Ingleside VCM Plant

Hazardous Waste Storage Inspection Record Date:_____

A check Indicates that the following items are compatible with the requirement of 40 CFR 264.175 RCRA Regulation:

Note: If any issues are detected, an entry must be made in the issues column. Each boxed has to be individually answered.

1. **All problems must be reported to the Shift Supervisor immediately. If further support is needed, the Inspector must take out a notification in the system.**
2. **The Process Area Supervisor will review the notifications in the morning and report in the 7:30 am meeting. The Process Area Supervisor will add the containment/liner notifications to the Daily Guidelines, until completion.**
3. **The Area Planner will progress the notifications to a work order.**
4. **Shift Supervisor: Along with the inpector, the shift supervisor needs to sign off each shift.**

EQUIPMENT INSPECTED	07:00	11:00	15:00	19:00	23:00	03:00	List issues Detected
VCM/EDC C-720A Sphere (No leaks,bulges, pitting, damage)							
VCM/EDC C-720B Sphere (No leaks,bulges,pitting, damage)							
G-720A/B Pumps (No seal leaks, damage)							
Flanges, Valves, Piping (No seal leaks,pitting, damage)							
H.E. Circ. Loop to C-450 (No leaks, pitting, damage)							
H.E. Circ. Loop to C-240 (No leaks, pitting,damage)							
H.E. Circ. Loop to C-2450 (No leaks, pitting, damage)							
Firewall drain valves are closed (3 valves) (No leaks,corrosion, damage)							
Containment/Liner-No cracks/bulges or concrete showing.							
No water in the containment (If yes: Remove within 24 hours)							
Tank: Legs, Seams, Ladders, Foundation (No leaks, damage)							

Hazardous Waste Dumpsters:
Hazardous Waste Dumpsters at Truck Loading (yes/no)_____Inspected (yes/no)_____(Properly labeled, no leaks, cover secured)

Containment/Liner Damage:
When damage is found, immediately notify the shift supervisor and the inspector put in a notification.
Inspector: Check the Daily Guidelines to make sure a notification has not been put in already-to prevent dupicate notifications.

Regulatory Information:
This document serves as the 24 hour leak detection system per RCRA standards. **All inspections should be conducted at the designated times and this record should be kept on file for a minimum of 5 years.**

Rain water must not be allowed to stay in the containment area under C-720 A/B for more than 24 hours after it has stopped raining.

Documentation:
Corrective action taken including notification number. If rain water is in the containment area, document how and when it was removed:

_____

_____

Print Name
Day Shift
Inspector: _____ **Supv.**:_____
Signature
Inspector: _____ **Supv.**:_____

Print Name
Night Shift
Inspector: _____ **Supv.**:_____
Signature
Inspector: _____ **Supv.**:_____

Appendix D

Closure Plan

Tank C-720B

Closure Plan and Cost Estimate

OxyChem
Ingleside, Texas

Table of Contents

1.0 Introduction 1
2.0 Unit and Waste Descriptions 2
3.0 Closure Plan 3
3.1 Closure Scenario 3
3.2 Oversight by a Professional Engineer 3
3.3 Closure Procedures 4
4.0 Notification of Closure Activities 9
5.0 Closure Certification 10
6.0 Permit Modification 11
7.0 Closure Schedule 12
8.0 Closure Cost Estimate 13

List of Tables

Table 1 Sample Analysis Methods
Table 2 Closure Schedule
Table 3 Closure Cost Estimate for Tank C-720B

List of Appendices

Appendix A Supporting Information for Closure Cost Estimates

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 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 x 1.042 x 1.070 x 1.036 x 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)
Closure activities begin – after prior 45 day notification	
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
Waste Removal and Disposal of Contents		
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
Decontaminate Tank with Solvent Flush Then Water Flush and Disposal of Rinsates		
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
Decontaminate Equipment		
10 hours of labor @ $100/hr		$1,000
	Subtotal	$1,000
Laboratory Analysis		
2 samples @ $500/sample		$1,000
	Subtotal	$1,000
Engineer's Inspection and Certification		
24 hours of labor @ $200/hr		$4,800
	Subtotal	$4,800
	Subtotal	$872,430
	10% Contingency	$87,243
	TOTAL	$959,673

NOTE: All costs are in 2019 dollars

Attachment V.I

Boilers and Industrial Furnaces

Table V.I.1. - Boilers/Industrial Furnaces

Permit Unit No.	Boilers/Industrial Furnaces	N.O.R. No.	Waste Nos.[1]	Waste Physical Form (Pumpable or Non-pumpable)	Reactive, Incompatible, or F020, F021, F022, F023, F026, or F027 Waste	Unit Status
5	CCIN-1	022	4,15,17,20,23	Pumpable	No	Active
	CCIN-2		4,15,17,20,23	Pumpable	No	Active

1. From the first column of Table IV.B.

* If the unit is already permitted, use the established "Permit Unit No." If the unit is not yet permitted, the number given here for the unit will become the "Permit Unit No." The numbers should be in an order that will be convenient for the facility operator.

Attachment V.I.1

CCIN-1 Halogen Acid Furnace

Not applicable. Conditions, monitoring, and AWFCO limitations are set in accordance with HWC MACT (40 CFR Part 63, Subpart EEE).

Table V.I.2. – Boiler/Industrial Furnace Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems

Unit Name/Number CCIN-1 and CCIN-2 Use a table for each unit and fill in all columns with the appropriate information

Parameter	Monitoring Basis[1]	Monitoring Device	Device Location	Permit Limit	AWFCO Y/N[2]
Operating Parameters					
Maximum Total Hazardous Waste Feed Rate *[Additional hazardous waste feed limits shall be added as determined necessary based upon feed mechanism and/or waste-specific needs]*				lb/hr	
Maximum Total Pumpable Hazardous Waste Mass Feed Rate *[Not applicable for Tier I or Tier I adjusted metals control limits]*				lb/hr	
Minimum Primary Combustion Chamber Temperature				°F	
Minimum Secondary Combustion Chamber Temperature				°F	
Maximum Secondary and/or Primary Combustion Chamber Temperature *[Include if using Tier II, III metals controls only]*				°F	
Maximum Flue Gas Temperature at PM Control Device Inlet *[Tier II and Tier III Metals only as applicable]*				°F	

Parameter	Monitoring Basis[1]	Monitoring Device	Device Location	Permit Limit	AWFCO Y/N[2]
Operating Parameters (continued)					
Maximum Combustion Gas Velocity Indicator *[If condition is something other than "maximum combustion gas velocity", write specific name of condition]*					
Atomization parameters *[as necessary]*					
Feed Rates: (Metals, Total Chlorine, and Ash)					
Secondary Combustion Zone Pressure *[or other method for fugitives monitoring]*					
Primary Combustion Zone Pressure *[or other method for fugitives monitoring]*					
CEMS Monitoring Parameters					
Stack Oxygen	Continuous	CEMS	Stack	No Limit (for correction to 7% O_2)	No
Stack CO	Continuous HRA	CEMS	Stack	100 ppmv HRA, 7% O_2, dry basis	Yes
Stack THC *[If specified in the permit]*	Continuous HRA	CEMS	Stack	20 ppmv HRA, 7% O_2, dry basis	Yes
APCD Parameters					
Pressure drop across Baghouse *[or fabric filter]*				in W.C.	

Parameter	Monitoring Basis[1]	Monitoring Device	Device Location	Permit Limit	AWFCO Y/N[2]
[Wet Scrubbers:]					
Ionizing Wet Scrubber minimum Voltage				kilovolts (kV)	
Minimum liquid to flue gas ratio (L/G)				gallons/1000 actual cubic feet (acf)	
[Wet Scrubbers:] (continued)					
Minimum scrubber blowdown				gallons/min	
Minimum scrubber water pH					
[Venturi Scrubbers:]					
Venturi scrubber minimum liquid to gas ratio (L/G)				gallons/1000 actual cubic feet (acf)	
Venturi differential gas pressure across venturi scrubber				in W.C.	
[Dry Scrubbers:]					
Minimum alkaline reagent *[insert name of reagent here, such as lime]* flow to the dry scrubber				pounds per minute	
Maximum flue gas flow rate				acfm	

Parameter	Monitoring Basis[1]	Monitoring Device	Device Location	Permit Limit	AWFCO Y/N[2]
[Absorbers:]					
Absorber minimum pH of incoming liquid					
Absorber minimum liquid to gas ratio (L/G)				gallons/1000 actual cubic feet (acf)	
Other Air Pollution Control Devices					
Permit conditions as necessary					

1. I*nstantaneous* as defined in 40 CFR 266.102(e)(6)(i)(A) shall mean a value which occurs at any time. A value shall be determined by the monitoring device no less than every 15 seconds.
   Continuous monitor is one which continuously samples or measures the regulated parameter without interruption and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.
   Hourly Rolling Average as defined in 40 CFR 266.102(e)(6)(ii).
   For carcinogenic metals and lead feed rates: *Instantaneous* as defined above or, *Rolling average* as defined in 40 CFR 266.102(e)(6)(ii)
2. *AWFCO: Automatic Waste Feed Cutoff.* For AWFCOs indicated by "Y", the Permit Limit in the table triggers an AWFCO.
3. The respective specific gravity and constituent concentration of each stream associated with a volumetric rate must be known to determine the mass feed rate.

Not applicable. Maximum constituent feed rates are set in accordance with the HWC MACT (40 CFR Part 63, Subpart EEE).

Table V.I.3 – Maximum Constituent Feed Rate

The total feed rate of constituent to the boiler/industrial furnace(s) shall not exceed the following limitations in grams per hour (g/hr) or tons per year (T/yr), as noted. The metals limitations have been evaluated through risk assessment. The ash and chlorine limits are based upon testing or regulatory limits.

Constituent	Maximum Allowable Feed Rate In All Feedstreams Hourly Basis (g/hr)	Maximum Allowable Feed Rate In All Hazardous Waste Feedstreams Hourly Basis (g/hr)[1]	Maximum Allowable Feed Rate in All Pumpable Hazardous Waste Feedstreams Hourly Basis (g/hr)[1]	Maximum Allowable Feed Rate in All Feedstreams Annual Basis (T/yr)
Arsenic				
Beryllium				
Cadmium				
Total Chromium				
Antimony				
Barium				
Lead				
Mercury				
Silver				
Thallium				
Total Chlorine				
Ash				
(Additional Constituent)				

1. Not applicable for Tier I or Tier I adjusted metals feed rate screening limits.

[Hourly feed rate limits must comply with the requirements of 40 CFR 266.106 for carcinogenic metals and non-carcinogenic metals. As applicable, the feed rate limit for chromium may be specified as hexavalent and total chromium limits.]

Table V.I.4 – Maximum Allowable Emission Rates

Not Applicable. Maximum emission rates are set in accordance with the HWC MACT (40 CFR Part 63, Subpart EEE).

[Applicant to use a table for each operating mode as applicable and for each unit]

Carcinogenic Constituent	Compliance Tier	Maximum Allowable Emission Rate[1]	Units[2]
Arsenic			g/hr
Beryllium			g/hr
Cadmium			g/hr
Chromium, Total			g/hr
Non-Carcinogenic Constituent	Compliance Tier	Maximum Allowable Emission Rate[1]	Units[2]
Antimony			g/hr
Barium			g/hr
Lead			g/hr
Mercury			g/hr
Silver			g/hr
Thallium			g/hr
Hydrogen Chloride			g/hr
Free Chlorine			g/hr
Particulate Matter			Grains/dscf

1. Not applicable for Tier I of Tier I adjusted feed rate screening limits.
2. *g/hr* denotes grams per hour. *Grains/dscf* denotes grains per dry standard cubic foot (standard conditions: 760 mm Hg, 68 F) after correction to a stack gas concentration of 7% oxygen.

Note: Site-specific dispersion modeling factor = x.xxx [insert dispersion factor for Tier III as applicable] micrograms per cubic meter per grams per second emission rate.

Table V.I.8 – Principal Organic Hazardous Constituents

Not applicable. Pursuant to the HWC MACT (40 CFR Part 63, Subpart EEE), Comprehensive Performance Tests (CPTs) are performed instead of RCRA Trial Burns.

List the wastes for which the trial burn demonstration will be made and the principal organic hazardous constituents in each waste.

Waste	Principal Organic Hazardous Constituents

Attachment V.I.1

Boiler and Industrial Furnace Report

Incinerator CCIN-1

OxyChem
Ingleside, Texas

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1.0 Overview

OxyChem operates two hydrochloric acid (HCl) production furnaces (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 HCl 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 HCl 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 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^-) 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 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 Figure 1.

Incinerator CCIN-1 consists of three primary process areas:

1. Incinerator,
2. HCl Absorber, and
3. Air Pollution Control System (APCS).

The 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 incineration system, in its prior configuration, is illustrated 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 incineration system.

1.2.1 Waste Storage

All of the liquid hazardous wastes and vent streams treated in the incinerator are generated on-site or off-site at other OxyChem facilities. Prior to being pumped to the 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 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 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 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 incinerator.

1.2.2 Incineration System

The CCIN-1 and CCIN-2 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. Appendix A provides the plot plan for CCIN-1.

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 incinerator utilized a single induced draft (ID) fan to provide motive force to transport the combustion gas through the 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 incinerator, which generates process steam for on-site use.

1.2.3 HCl Absorber

The 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 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 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 incinerator.

The wastes that are burned in the 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 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 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 incineration system's engineering drawings (Appendix A) and specifications were prepared by OxyChem engineering.

3.1 Description of Incinerator

The incinerator system consists of the firebox (combustion zone) and the waste heat boiler. The incinerator and waste heat boiler are oriented to each other as shown 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 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 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 incinerator system. Natural gas is the only support fuel used for the 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 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 other wastes prior to incineration.

The heavy ends normally are 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 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 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 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 incinerator. The split between the two 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 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 incineration conditions are outside the RCRA permit limits. The AWFCO system resides in the distributed control system (DCS). During startup and shutdown of the incinerator or during process upsets, the interlock system automatically stops hazardous liquid waste feed systems and prevents their restart until the 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 shalt 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 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 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[a]	25 psig
Low natural gas pressure[a]	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 incinerator continues to run on natural gas to incinerate vent gases. These limits and conditions reflect AWFCO requirements for the OxyChem hazardous waste 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 kacfm (Hourly Rolling Average)
Maximum Combustion Chamber Pressure	> 0 in. wc (Instantaneous)
Maximum Stack Gas CO Concentration	≥ 100 ppm dry @ 7% O_2 (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_2 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_2 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 NOx 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_2 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 exchanges, 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 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 incineration system that 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 incineration system operation. 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 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 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 Incinerator CCIN-1, is provided 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

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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.

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Tables

Table 2-1 Stream Characteristics

Component	VCM HE	VCM LE	EDC HE	Hazardous Waste Oil	Mother Liquor
Organic Hazardous Air Pollutants (HAPs) Concentration Ranges (wt. %)					
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
Other Organic Constituents Concentration Ranges (wt. %)					
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[a]	30-60	-	25-50	-	30-60
Oil	-	-	-	>95	-
Maximum Inorganic HAP Concentrations (mg/kg)[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)

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

[a] – Primarily chlorinated butanes and butenes

[b] – Except chlorine, which is presented as a range of weight percents

[c] – Intermittently generated

Table 3-1 Incinerator Equipment [1]

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

[1]Based on design conditions

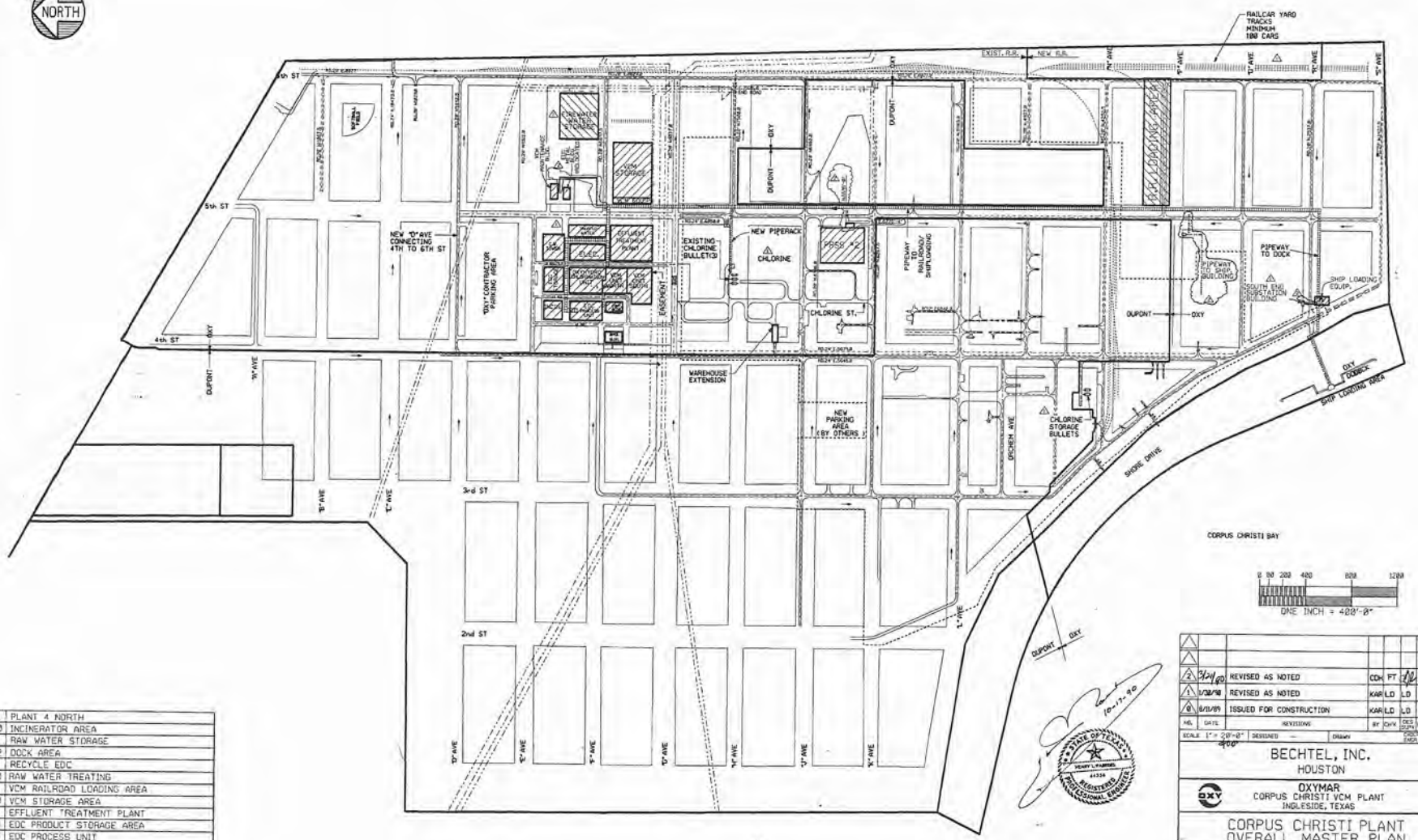
[2]The first number designates the unit within the CCIN-1 incinerator system and the second number designates the unit within the CCIN-2 incinerator system

[3]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 0-200 ppmv 0-3,000 ppmv

Figures



4D-00-A-401	PLANT 4 NORTH
5D-00-A-500	INCINERATOR AREA
6D-00-A-601	RAW WATER STORAGE
8D-00-A-802	DOCK AREA
7D-00-A-701	RECYCLE EDC
7D-00-A-600	RAW WATER TREATING
8D-00-A-801	VCM RAILROAD LOADING AREA
8D-00-A-800	VCM STORAGE AREA
5D-00-A-501	EFFLUENT TREATMENT PLANT
7D-00-A-700	EDC PRODUCT STORAGE AREA
2D-00-A-200	EDC PROCESS UNIT
4D-00-A-400	PLANT 4 SOUTH
3D-00-A-300	PLANT 3 OVERALL
9D-00-A-901	PROCESS AREA PLOT PLAN

REFERENCE DRAWINGS

NO.	DATE	REVISIONS	BY	CHK	DES SUPV	ENGR	PROJ ENGR	APPR
2	5/24/90	REVISED AS NOTED	CDH	FT	[illegible]	---	[illegible]	[illegible]
1	3/28/90	REVISED AS NOTED	KAR	LD	LD	---	LDB	ARP
0	8/11/89	ISSUED FOR CONSTRUCTION	KAR	LD	LD	---	LDB	ARP

SCALE 1" = 200'-0" (1:400) DESIGNED — DRAWN

BECHTEL, INC.
HOUSTON

OXYMAR
CORPUS CHRISTI VCM PLANT
INGLESIDE, TEXAS

CORPUS CHRISTI PLANT OVERALL MASTER PLAN

AREA DESIGNATION | TYPE | EWR NUMBER | AFE NUMBER

JOB NO. 19611 | DRAWING NO. 9D-00-A-900 | REV. 2

CADD FILE NAME: 9D00A900.DGN FMG 03/17/90 RF=D400.DGN

MATERIAL	MOL. WT.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
CH_4/NO	16.40/30								-/27	-/27	-/27					-/27				-/27					
C_2H_4	28.04																								
C_2H_6	30.06																								
C_3H_8	44.11																								
C_4H_{10}	58.14																								
VENT GAS $C_{2.05}H_{6.46}Cl_{0.76}$	60.03	786																							
CO	28	81																							
H_2	2.02	5																							
HCL	36.46	31							3146	3146	60	3086		15345	3069	1									
H_2O	18.02	1	34220					790	1293	3409	3409	9855	27774	0	138105	27621	2863	483401.5	49054	4816971.2	1818	8889	92.5	659	7.7	38.5
CL_2	70.9								77	77	77	6													
CO_2	44	357							6621	6621	6621	6621								6621					
N_2	28	6783						38582	45358	45358	45358	45358				45358				45358					
AR	39.95																								
O_2	32	18						11714		6120	6120	6120				6120				6120					
NAOH	39.99																165		9.5		TRACE		165		9.5
Na_2SO_4	142.04																4203	12307	4173		77				
$Na_2S_2O_3$	158.09																39.5		3.3			39.5		3.3	
NACL	58.43																12167	4250	12085		223				
LIQUID WASTE $C_{2.68}H_{2.97}O_{0.13}Cl_{0.76}$	99.88							4311																	
TEMPERATURE °F		105	90				90	95	388	2000	500	149	110	90	148	113	102	113	100	113	103	70	158	70	158
PRESSURE - PSIA		15.205						40	14.7	215	(-4)	(-10)	(-15)			(-16)					(-17)				
DENSITY - LBS/CU.FT.			62.116					77.4									64.68	62.08	62.08	63.96	63.96	62.08	62.08	62.08	75.7	75	75.7
VISCOSITY - C.P.			.753					0.8					0.6												
AVER.MOL.WT.		29.59						99.88	28.58	18.02	28.93	28.93	27.12			28.76					29.06				
FLOW - GPM OR (ACFM)		(1761)	68.7				7	(12,045)	(16.9)	(67,456)	(26,979)	(19,311)	59.5	0	300	60	1004	1018	1000	(14,576)	19	0.22	0.02	1.35	0.02	0.08
SCFM (60°F & 1 ATMOS)		1720	-				-	11,289	151	14,147	14,153	15,885	-	-	-	13,313	-	-	-	13,027	-	-	-	-	-	-
TOTAL LBS/HR		8662	3220				4311	51,087	12.93	64,758	64,750	68,988	30,860	0	153,450	30,690	499,976	507,098	497,968	59,944	9,189	132	824	11	48
PHASE		V	L			L	V	L/V	V	V	V	V	L	L	L	V	L	L	L	V	L	L	L	L	L

HEAT EXCHANGER	E-550/E-570	E-551/E-571	E-552A/B/E-572A/B (ONE SPARE)	E-552A/B/E-572A/B							
THEO.DUTY - BTU/HR.	$26.89X10^6$	945,450									
DESIGN DUTY	$29.27X10^6$	$1.04X10^6$	$6.57X10^6$								
M.T.D. = °F.											
AREA - FT.^{2}											
U_c BTU/HR. - FT.^{2}°F.											
U_D BTU/HR. - FT.^{2}°F.											
FOULING FACTOR											

VCMPFD.DGN 03/19/93

MATERIAL BALANCE FIGURES IN _____ PER _____ WITH DESIGN CAPACITY OF _____ / _____ AT _____ HOURS/ _____

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LEGEND

- STREAM NUMBER
- GPM
- POUNDS/HR.
- SCFM
- TEMPERATURE °F
- PSIG

NO.	REMARKS	DRAWN	CHKD.	APP.	DATE
7	AS-BUILT PER MACT PROJECT	CM	DER		09/22/92
1	REMOVED HOLD #1 & 2. GENERAL UPDATE.	OCR PG	JCR		4/24/89
2	FOR 1.1 BILLION LB/YR DESIGN BASIS	HN PG	AA	ARP OCR	9/5/89
3	REVISED AS CLOUDED	PG		AA ARP	
4	STORM WATER TANK PROJECT TEAR#91501S	MAG	TJW	TJW	8/29/94
5	CW BLOWDOWN RECYCLING TEAR #94588S	MAG	JEB	TJW	8/21/95
6	REVISED FOR MACT PROJECT-IPC	CM	MAG	RJH	10/26/01

DRAFTSMAN	DATE
PROCESS ENGR.	
PROCESS ENGR.	
PROJECT APP.	

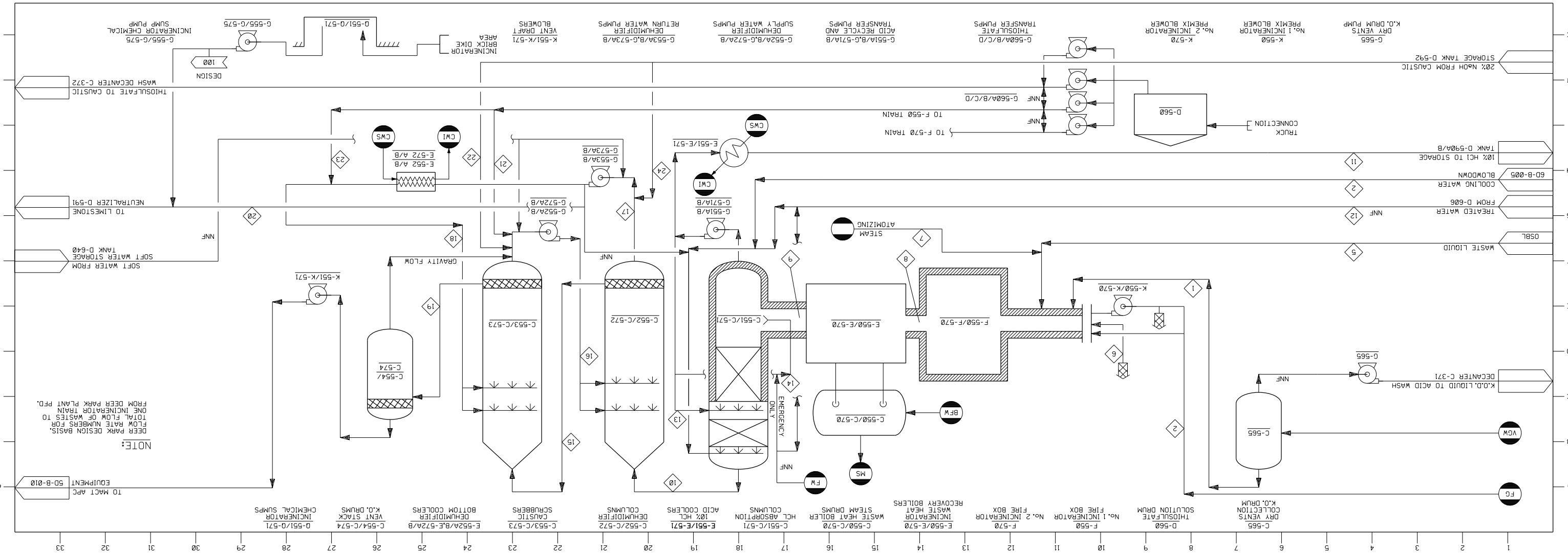
OXYMAR
INGLESIDE VCM PLANT
INGLESIDE, TEXAS

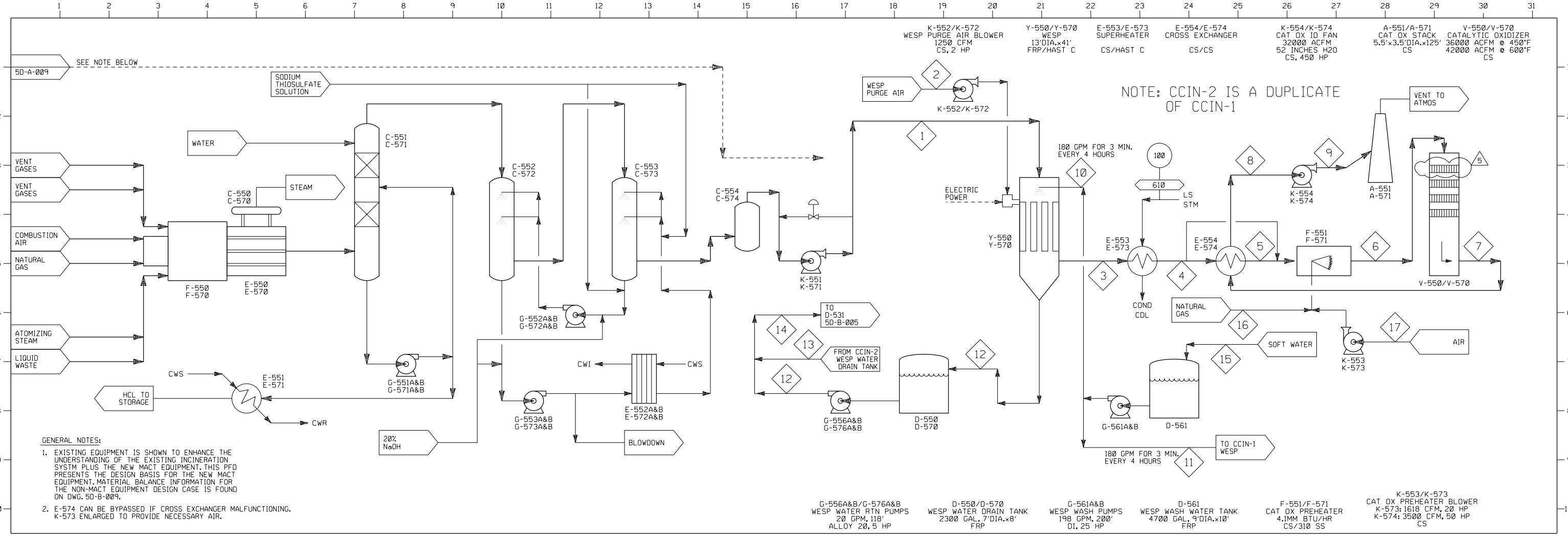
SCALE	NONE	JOB NO.	19611	DWG	50-B-009

VCM PLANT PROCESS FLOW DIAGRAM
INCINERATOR/SCRUBBER SYSTEM (DESIGN CASE)

REV. 7

DSI:I32,4\50D009.DGN
DATE 12-04-00





GENERAL NOTES:

1. EXISTING EQUIPMENT IS SHOWN TO ENHANCE THE UNDERSTANDING OF THE EXISTING INCINERATION SYSTM PLUS THE NEW MACT EQUIPMENT. THIS PFD PRESENTS THE DESIGN BASIS FOR THE NEW MACT EQUIPMENT. MATERIAL BALANCE INFORMATION FOR THE NON-MACT EQUIPMENT DESIGN CASE IS FOUND ON DWG. 5D-B-00%.
2. E-574 CAN BE BYPASSED IF CROSS EXCHANGER MALFUNCTIONING. K-573 ENLARGED TO PROVIDE NECESSARY AIR.

G-556A&B/G-576A&B
WESP WATER RTN PUMPS
20 GPM, 118'
ALLOY 20.5 HP

D-550/D-570
WESP WATER DRAIN TANK
2300 GAL, 7'DIA.x8'
FRP

G-561A&B
WESP WASH PUMPS
198 GPM, 200'
DI. 25 HP

D-561
WESP WASH WATER TANK
4700 GAL, 9'DIA.x10'
FRP

F-551/F-571
CAT OX PREHEATER
4.1MM BTU/HR
CS/310 SS

K-553/K-573
CAT OX PREHEATER BLOWER
K-573: 1618 CFM, 20 HP
K-574: 3500 CFM, 50 HP
CS

MATERIAL	MOL. WT.	FREEZING POINT °F	BOILING POINT °F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	-	◇	◇	◇	◇	◇	◇	◇
GASES:																					-							
CO2	44			7470		7470	7470	7470	7772	7772	7772	7772							3									
O2	32			9154	1308	10462	10462	10462	10503	10503	10503	10503								466									
N2	28			52428	4306	56734	56734	56734	58269	58269	58269	58269							2	1533									
H2O	18			7853		7853	7853	7853	8086	8086	8086	8086																	
CH4	16																		90									
C2H6	30																		9									
C3H8	44																		8									
LIQUIDS:																												
H2O	18	32	212										1125	1125	1125	1125	2250	2250										
TOTAL				76905	5614	82519	82519	82519	84630	84630	84630	84630	1125	1125	1125	1125	2250	2250	112	1999								
TEMPERATURE °F				132	80	129	155	356	450	450	256	297	90	90	130	130	130	90	80	80								
PRESSURE - PSIA ('H2O G)				14.66 (-1)	14.7 (0)	14.45 (-7)	14.23 (-13)	14.09 (-17)	14.01 (-19)	13.29 (-39)	13.04 (-46)	14.77 (+2)							14.7	14.7								
DENSITY - LBS./CU.FT.				0.0642	0.0732	0.0638	0.0601	0.0449	0.0400	0.0380	0.0473	0.0507	62.4	62.4	62.4	62.4	62.4	62.4	0.0455									
VISCOSITY - C.P.																												
AVER.MOL.WT.				27.83	28.84	27.89	27.89	27.89	27.88	27.88	27.88	27.88							17.93	28.84								
FLOW - GPM													2.25	2.25	2.25	2.25	4.50	4.50										
SCFM (68°F & 1 ATMOS)				17751	1250	19002	19002	19002	19489	19489	19489	19489							40	445								
ACFM				19965	1279	21571	22871	30648	35255	37165	29803	27819							41	455								
TOTAL LB.MOLE/HR				2764.54	194.66	2959.20	2959.20	2959.20	3035.11	3035.11	3035.11	3035.11							6.25	69.31								

INCLUDES 3" WC DUCT LOSS

HEAT EXCHANGER	E-553/E-573 SUPERHEATER	E-554/E-574 CROSS EXCHANGER	F-551/F-571 CAT OX PREHEATER			
THEO.DUTY - BTU/HR.	565,000		2,400,000			
DESIGN DUTY	1,440,000	4,429,000	4,100,000			
M.T.D. = °F.	128	100				
AREA - FT.^{2}	698	10660				
U_c BTU/HR. - FT.^{2}-°F.	16.9	4.97				
U_D BTU/HR. - FT.^{2}-°F.	U_D=16.5 / U_S=16.1	U_D=4.95 / U_S=4.2				
FOULING FACTOR	0.0015	0.001				

LEGEND
◇ STREAM NUMBER
GPM
POUNDS/HR.
SCFM @ 68°F
TEMPERATURE °F
PSIG
STD VOL = 385.27 ft^3/lbM

FMT FILE NAME: 00014.FMT (22 34 PROCESS FLO SHT)
FMT CELL NAME: 00014

MATERIAL BALANCE FIGURES IN POUNDS PER HOUR WITH DESIGN CAPACITY OF - / DAY AT 24 HOURS/ DAY

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NO.	REVISIONS	DRAWN	CHKD.	APP.	DATE
4	REVISED PER TEAR NO. 20065208	MRG	JLM	JLM	08/09/07
3	REVISED PER TEAR NO. 20075059	MRG	JLM	JLM	04/16/07
2	REVISED PER TEAR NO. 20038076	MRG	SMS	SMS	06/03/03
1	AS-BUILT PER MACT PROJECT	CM	DER	RJH	09-23-02
0	ISSUE FOR CONSTRUCTION	KPK	DJH	RJH	01-22-02
0B	ISSUE FOR TNRCC	KPK	DJH	RJH	05-10-01
5	REVISED PER TEAR NO. 20055094	MRG	JLM	JLM	12/11/07

DRAFTSMAN CM DATE
PROCESS ENGR. DJH
PROCESS ENGR.
PROJECT APP.
FILE NAME: 5DB010.DGN

OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INGLESIDE, TEXAS

DWG. 5D-B-010 REV: 5

PROCESS FLOW SHEET
INGLESIDE MACT

MACT PROJECT
CCIN-1 / CCIN-2

Appendix A

Engineering Drawings

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-0024, 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-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

MATERIAL	MOL. WT.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
CH_4/NO	16.40/30								-/27	-/27	-/27					-/27				-/27					
C_2H_4	28.04																								
C_2H_6	30.06																								
C_3H_8	44.11																								
C_4H_{10}	58.14																								
VENT GAS $C_{2.05}H_{6.46}Cl_{0.76}$	60.03	786																							
CO	28	81																							
H_2	2.02	5																							
HCL	36.46	31							3146	3146	60	3086		15345	3069	1									
H_2O	18.02	1	34220					790	1293	3409	3409	9855	27774	0	138105	27621	2863	483401.5	49054	4816971.2	1818	8889	92.5	659	7.7	38.5
CL_2	70.9								77	77	77	6													
CO_2	44	357							6621	6621	6621	6621								6621					
N_2	28	6783						38582	45358	45358	45358	45358				45358				45358					
AR	39.95																								
O_2	32	18						11714		6120	6120	6120				6120				6120					
NAOH	39.99																165		9.5		TRACE		165		9.5
Na_2SO_4	142.04																4203	12307	4173		77				
$Na_2S_2O_3$	158.09																39.5		3.3			39.5		3.3	
NACL	58.43																12167	4250	12085		223				
LIQUID WASTE $C_{2.68}H_{2.97}O_{0.13}Cl_{0.76}$	99.88							4311																	
TEMPERATURE °F		105	90				90	95	388	2000	500	149	110	90	148	113	102	113	100	113	103	70	158	70	158
PRESSURE - PSIA		15.205						40	14.7	215	(-4)	(-10)	(-15)			(-16)					(-17)				
DENSITY - LBS/CU.FT.			62.116					77.4									64.68	62.08	62.08	63.96	63.96	62.08	62.08	62.08	75.7	75	75.7
VISCOSITY - C.P.			.753					0.8					0.6												
AVER.MOL.WT.		29.59						99.88	28.58	18.02	28.93	28.93	27.12			28.76					29.06				
FLOW - GPM OR (ACFM)		(1761)	68.7				7	(12,045)	(16.9)	(67,456)	(26,979)	(19,311)	59.5	0	300	60	1004	1018	1000	(14,576)	19	0.22	0.02	1.35	0.02	0.08
SCFM (60°F & 1 ATMOS)		1720	-				-	11,289	151	14,147	14,153	15,885	-	-	-	13,313	-	-	-	13,027	-	-	-	-	-	-
TOTAL LBS/HR		8662	3220				4311	51,087	12.93	64,758	64,750	68,988	30,860	0	153,450	30,690	499,976	507,098	497,968	59,944	9,189	132	824	11	48
PHASE		V	L			L	V	L/V	V	V	V	V	L	L	L	V	L	L	L	V	L	L	L	L	L

HEAT EXCHANGER	E-550/E-570	E-551/E-571	E-552A/B/E-572A/B (ONE SPARE)	E-552A/B/E-572A/B							
THEO.DUTY - BTU/HR.	$26.89X10^6$	945,450									
DESIGN DUTY	$29.27X10^6$	$1.04X10^6$	$6.57X10^6$								
M.T.D. = °F.											
AREA - FT.^{2}											
U_c BTU/HR. - FT.^{2}°F.											
U_D BTU/HR. - FT.^{2}°F.											
FOULING FACTOR											

VCMPFD.DGN 03/19/93

MATERIAL BALANCE FIGURES IN _____ PER _____ WITH DESIGN CAPACITY OF _____ / _____ AT _____ HOURS/ _____

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LEGEND

- STREAM NUMBER
- GPM
- POUNDS/HR.
- SCFM
- TEMPERATURE °F
- PSIG

NO.	REMARKS	DRAWN	CHKD.	APP.	DATE
7	AS-BUILT PER MACT PROJECT	CM	DER		09/22/92
1	REMOVED HOLD #1 & 2. GENERAL UPDATE.	OCR PG	JCR		4/24/89
2	FOR 1.1 BILLION LB/YR DESIGN BASIS	HN PG	AA	ARP OCR	9/5/89
3	REVISED AS CLOUDED	PG		AA ARP	
4	STORM WATER TANK PROJECT TEAR#91501S	MAG	TJW	TJW	8/29/94
5	CW BLOWDOWN RECYCLING TEAR #94588S	MAG	JEB	TJW	8/21/95
6	REVISED FOR MACT PROJECT-IPC	CM	MAG	RJH	10/26/01

DRAFTSMAN	DATE
PROCESS ENGR.	
PROCESS ENGR.	
PROJECT APP.	

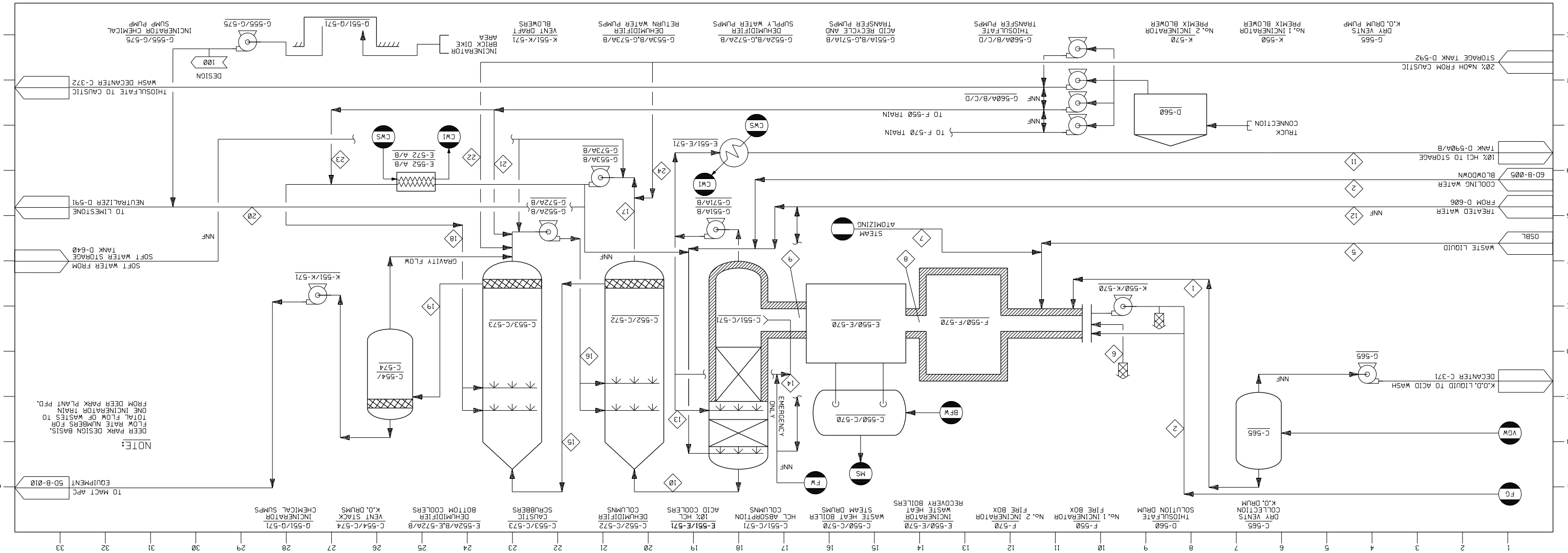
OXYMAR
INGLESIDE VCM PLANT
INGLESIDE, TEXAS

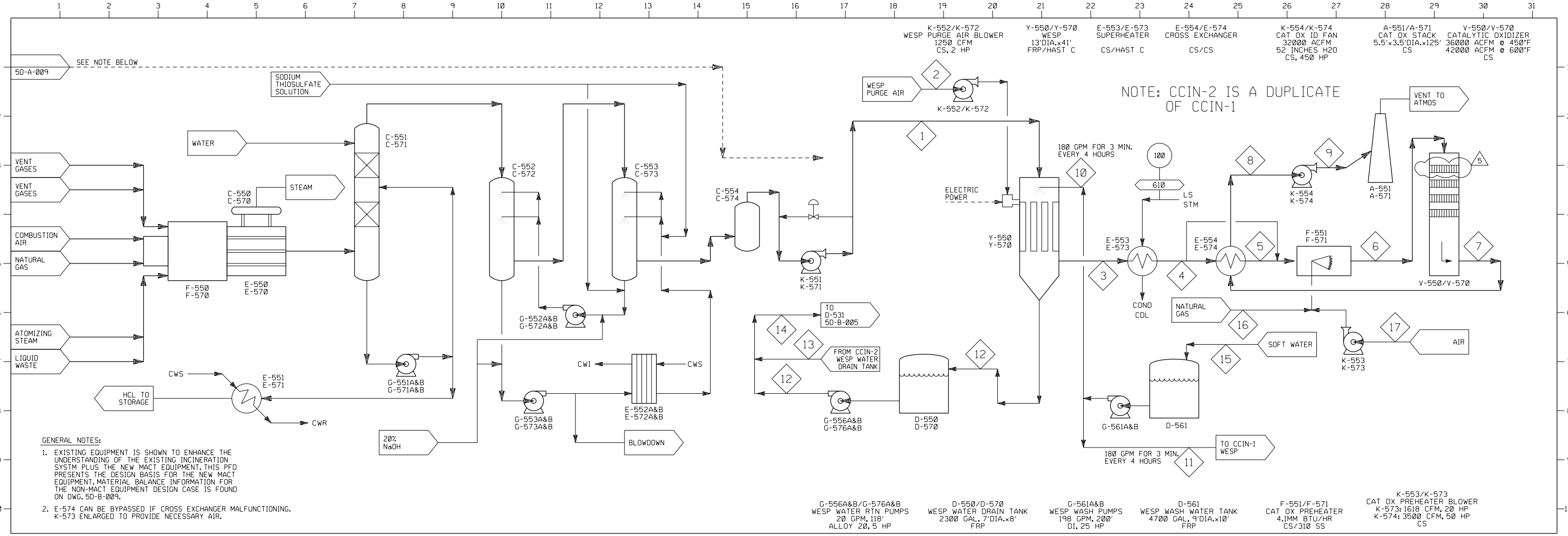
SCALE	NONE	JOB NO.	19611	DWG	50-B-009

VCM PLANT PROCESS FLOW DIAGRAM
INCINERATOR/SCRUBBER SYSTEM (DESIGN CASE)

REV. 7

DSI:I32,4\50D009.DGN
DATE 12-04-00





GENERAL NOTES:

1. EXISTING EQUIPMENT IS SHOWN TO ENHANCE THE UNDERSTANDING OF THE EXISTING INCINERATION SYSTM PLUS THE NEW MACT EQUIPMENT. THIS PFD PRESENTS THE DESIGN BASIS FOR THE NEW MACT EQUIPMENT. MATERIAL BALANCE INFORMATION FOR THE NON-MACT EQUIPMENT DESIGN CASE IS FOUND ON DWG. 5D-B-00%.
2. E-574 CAN BE BYPASSED IF CROSS EXCHANGER MALFUNCTIONING. K-573 ENLARGED TO PROVIDE NECESSARY AIR.

G-556A&B/G-576A&B
WESP WATER RTN PUMPS
20 GPM, 118'
ALLOY 20.5 HP

D-550/D-570
WESP WATER DRAIN TANK
2300 GAL, 7'DIA.x8'
FRP

G-561A&B
WESP WASH PUMPS
198 GPM, 200'
DI. 25 HP

D-561
WESP WASH WATER TANK
4700 GAL, 9'DIA.x10'
FRP

F-551/F-571
CAT OX PREHEATER
4.1MM BTU/HR
CS/310 SS

K-553/K-573
CAT OX PREHEATER BLOWER
K-573: 1618 CFM, 20 HP
K-574: 3500 CFM, 50 HP
CS

MATERIAL	MOL. WT.	FREEZING POINT °F	BOILING POINT °F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	-	◇	◇	◇	◇	◇	◇	◇
GASES:																					-							
CO2	44			7470		7470	7470	7470	7772	7772	7772	7772							3									
O2	32			9154	1308	10462	10462	10462	10503	10503	10503	10503								466									
N2	28			52428	4306	56734	56734	56734	58269	58269	58269	58269							2	1533									
H2O	18			7853		7853	7853	7853	8086	8086	8086	8086																	
CH4	16																		90									
C2H6	30																		9									
C3H8	44																		8									
LIQUIDS:																												
H2O	18	32	212										1125	1125	1125	1125	2250	2250										
TOTAL				76905	5614	82519	82519	82519	84630	84630	84630	84630	1125	1125	1125	1125	2250	2250	112	1999								
TEMPERATURE °F				132	80	129	155	356	450	450	256	297	90	90	130	130	130	90	80	80								
PRESSURE - PSIA ('H2O G)				14.66 (-1)	14.7 (0)	14.45 (-7)	14.23 (-13)	14.09 (-17)	14.01 (-19)	13.29 (-39)	13.04 (-46)	14.77 (+2)							14.7	14.7								
DENSITY - LBS./CU.FT.				0.0642	0.0732	0.0638	0.0601	0.0449	0.0400	0.0380	0.0473	0.0507	62.4	62.4	62.4	62.4	62.4	62.4	0.0455									
VISCOSITY - C.P.																												
AVER.MOL.WT.				27.83	28.84	27.89	27.89	27.89	27.88	27.88	27.88	27.88							17.93	28.84								
FLOW - GPM													2.25	2.25	2.25	2.25	4.50	4.50										
SCFM (68°F & 1 ATMOS)				17751	1250	19002	19002	19002	19489	19489	19489	19489							40	445								
ACFM				19965	1279	21571	22871	30648	35255	37165	29803	27819							41	455								
TOTAL LB.MOLE/HR				2764.54	194.66	2959.20	2959.20	2959.20	3035.11	3035.11	3035.11	3035.11							6.25	69.31								

INCLUDES 3" WC DUCT LOSS

HEAT EXCHANGER	E-553/E-573 SUPERHEATER	E-554/E-574 CROSS EXCHANGER	F-551/F-571 CAT OX PREHEATER			
THEO.DUTY - BTU/HR.	565,000		2,400,000			
DESIGN DUTY	1,440,000	4,429,000	4,100,000			
M.T.D. = °F.	128	100				
AREA - FT.^{2}	698	10660				
U_c BTU/HR. - FT.^{2}-°F.	16.9	4.97				
U_D BTU/HR. - FT.^{2}-°F.	U_D=16.5 / U_S=16.1	U_D=4.95 / U_S=4.2				
FOULING FACTOR	0.0015	0.001				

LEGEND
◇ STREAM NUMBER
GPM
POUNDS/HR.
SCFM @ 68°F
TEMPERATURE °F
PSIG
STD VOL = 385.27 ft^3/lbM

FMT FILE NAME: 00014.FMT (22 34 PROCESS FLO SHT)
FMT CELL NAME: 00014

MATERIAL BALANCE FIGURES IN POUNDS PER HOUR WITH DESIGN CAPACITY OF - / DAY AT 24 HOURS/ DAY

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NO.	REVISIONS	DRAWN	CHKD.	APP.	DATE
4	REVISED PER TEAR NO. 20065208	MRG	JLM	JLM	08/09/07
3	REVISED PER TEAR NO. 20075059	MRG	JLM	JLM	04/16/07
2	REVISED PER TEAR NO. 20038076	MRG	SMS	SMS	06/03/03
1	AS-BUILT PER MACT PROJECT	CM	DER	RJH	09-23-02
0	ISSUE FOR CONSTRUCTION	KPK	DJH	RJH	01-22-02
0B	ISSUE FOR TNRCC	KPK	DJH	RJH	05-10-01
5	REVISED PER TEAR NO. 20055094	MRG	JLM	JLM	12/11/07

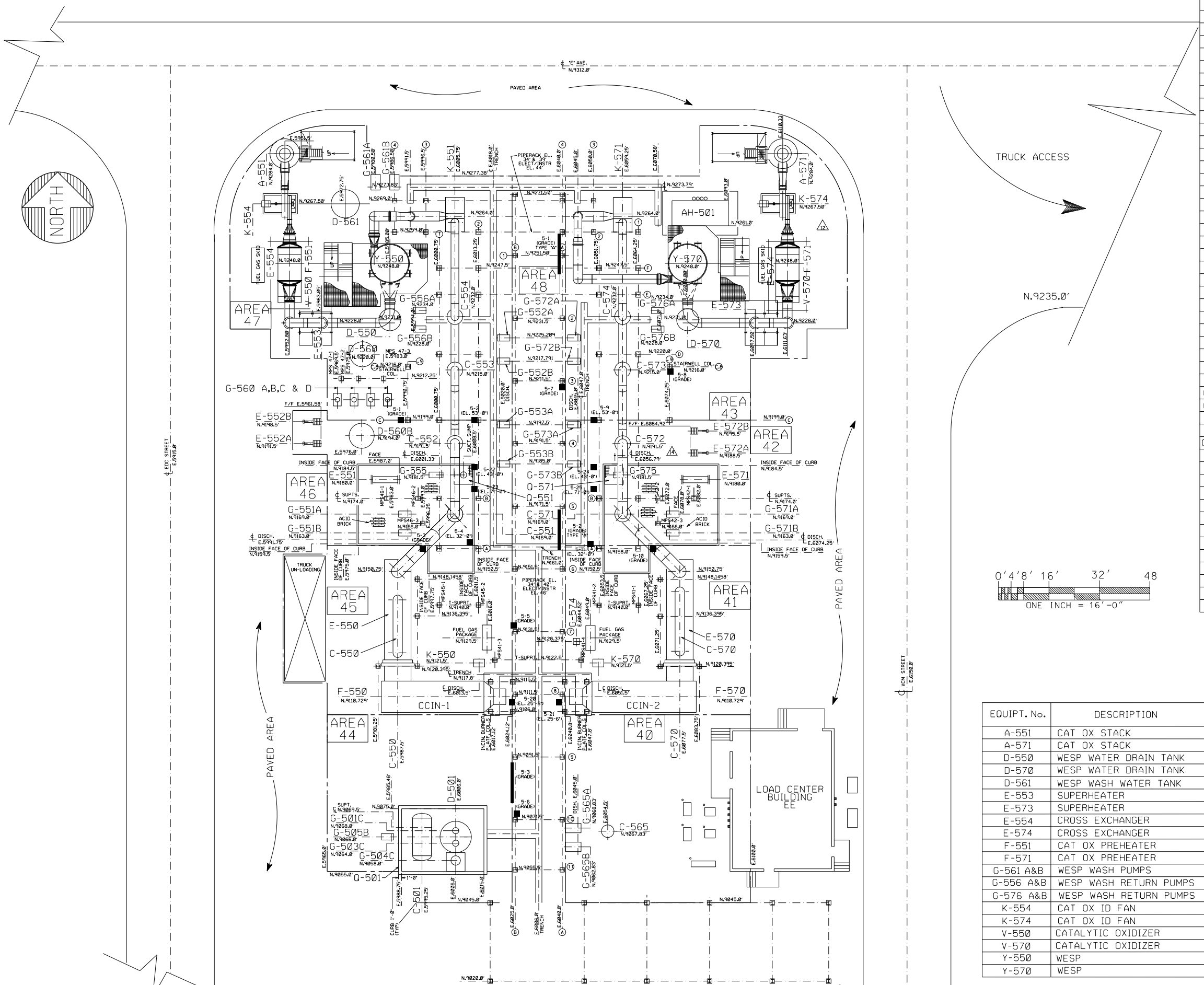
DRAFTSMAN CM DATE
PROCESS ENGR. DJH
PROCESS ENGR.
PROJECT APP.
FILE NAME: 5DB010.DGN

OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INGLESIDE, TEXAS

DWG. 5D-B-010 REV: 5

PROCESS FLOW SHEET
INGLESIDE MACT

MACT PROJECT
CCIN-1 / CCIN-2



0'4'8' 16' 32' 48
ONE INCH = 16'-0"

EQUIPT. No.		P.O.S. EL.
A-550	VENT STACK (REMOVED)	20'-6"
A-570	VENT STACK (REMOVED)	20'-6"
C-501	EDC PLANT DECOMMISSIONING DRUM	12'-11"
C-550	WASTE HEAT BOILER STEAM DRUM	℄ EL.33'-9"
C-551	HCL ABSORPTION COLUMN	20'-0"
C-552	DEHUMIDIFIER COLUMN	20'-0"
C-553	CAUSTIC SCRUBBER	20'-0"
C-554	VENT STACK KNOCK-OUT DRUM	20'-0"
C-565	VENTS COLLECTION K.O. DRUM	20'-0"
C-570	WASTE HEAT BOILER STEAM DRUM	℄ EL.33'-9"
C-571	HCL ABSORPTION COLUMN	20'-0"
C-572	DEHUMIDIFIER COLUMN	20'-0"
C-573	CAUSTIC SCRUBBER	20'-0"
C-574	VENT STACK KNOCK-OUT DRUM	20'-0"
D-501	DIRECT CHLOR./INCINERATION AREA STORM WATER SUMP	-
D-560	THIOSULFATE STORAGE TANK	20'-0"
E-550	INCINERATOR WASTE HEAT RECOVERY BOILER	21'-0"
E-551	10% HCL ACID COOLER	21'-3"
E-570	INCINERATOR WASTE HEAT RECOVERY BOILER	21'-0"
E-571	10% HCL ACID COOLER 12	21'-3"
E-552 A & B	DEHUMIDIFIER BOTTOM'S COOLERS (RE-LOCATED)	20'-0"
E-572 A & B	DEHUMIDIFIER BOTTOM'S COOLERS (RE-LOCATED)	20'-0"
F-550	No. 1 INCINERATOR FIRE BOX	21'-0"
F-570	No. 2 INCINERATOR FIRE BOX	21'-0"
G-501C	DIRECT CHLOR./INCINERATION AREA STORM WATER PUMP	20'-3"
G-503C	DIRECT CHLOR./INCINERATION AREA STORM WATER PUMP	20'-4"
G-504C	DIRECT CHLOR./INCINERATION AREA STORM WATER PUMP	20'-4"
G-505B	DIRECT CHLOR. DECOMMISSIONING PUMP	20'-11⅞"
G-575	INCINERATOR CHEMICAL SUMP PUMP	20'-6"
-	F-550/F-570 INCINERATOR FUEL GAS PACK.	20'-0"
G-551 A & B	ACID RECYCLE & TRANSFER PUMPS	20'-0"
G-552 A & B	DEHUMIDIFIER SUPPLY WATER PUMP	20'-0"
G-553 A & B	DEHUMIDIFIER RETURN WATER PUMP	20'-0"
G-555	INCINERATOR CHEMICAL SUMP PUMP	20'-6"
G-560A, B, C, D	THIOSULFATE TRANSFER PUMP	20'-0"
G-565A & B	WET VENTS K.O. DRUM PUMP	19'-11¼"
G-571A & B	ACID RECYCLE & TRANSFER PUMP	20'-0"
G-572A & B	DEHUMIDIFIER SUPPLY WATER PUMP	20'-0"
G-573A & B	DEHUMIDIFIER RETURN WATER PUMP	20'-0"
K-551	VENT DRAFT BLOWER	20'-6"
K-571	VENT DRAFT BLOWER	20'-6"
Q-551	INCINERATION CHEMICAL SUMP	-
Q-571	INCINERATION CHEMICAL SUMP	-
K-550	No. 1 INCINERATOR PREMIX BLOWER	20'-0"
K-570	No. 2 INCINERATOR PREMIX BLOWER	20'-0"
Q-501	DIRECT CHLOR./INCINERATION STORM WATER BASIN	-
G-574	HOMOGENIZER PUMP	-
D-560-B	THIOSULFATE STORAGE TANK	20'-0"

EQUIPT. No.	DESCRIPTION
A-551	CAT OX STACK
A-571	CAT OX STACK
D-550	WESP WATER DRAIN TANK
D-570	WESP WATER DRAIN TANK
D-561	WESP WASH WATER TANK
E-553	SUPERHEATER
E-573	SUPERHEATER
E-554	CROSS EXCHANGER
E-574	CROSS EXCHANGER
F-551	CAT OX PREHEATER
F-571	CAT OX PREHEATER
G-561 A&B	WESP WASH PUMPS
G-556 A&B	WESP WASH RETURN PUMPS
G-576 A&B	WESP WASH RETURN PUMPS
K-554	CAT OX ID FAN
K-574	CAT OX ID FAN
V-550	CATALYTIC OXIDIZER
V-570	CATALYTIC OXIDIZER
Y-550	WESP
Y-570	WESP

LEGEND:

■ —S.W.A.N. STATION
SWAN STATION NO.
(EL.)

■ — EMERGENCY SHOWER/EYE WASH
EYE WASH NO.
(EL.)

NO	REVISION	DATE	BY	TEAR	CHCK	ENG.
14	G-575 PER TEAR	06/05/03	JCR	20017600	HDL	HDL
13	AS-BUILT PER MACT PROJECT	11/21/02	CM		DER	
12	IFC FOR MACT PROJECT	09/19/01	DLB	156104	KPK	CN
11	G-555 PER TEAR 976776	01/29/98	JCR	976776	JEB	JEB
10	RELOCATE G-505B & REV. EQ. NO.	08/11/97	MRG	976380	AGC	JEB
9	ADD SAFETY SHOWERS 5-22, 23, 24, 25	07/16/96	SPJ	956052	MRG	EWD
8	ADDED D-560B	10/03/94	DE		JEB	JEB
7	ADDED PUMP G-574	10/05/93	ACC		JAR	JAR
6	REVISED TO SHOW G-565A/B	11/14/91	JEC	N/A	JEC	JEC

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OCCIDENTAL CHEMICAL CORP.
INGLESIDE PLANT
INGLESIDE, TEXAS

DRAWN BY V. WATSON | APP BY | SCALE: 1" = 16'-0"

PLOT PLAN INCINERATOR UNIT CCIN-1 AND CCIN-2

COST CENTER	TYPE	SIZE	DRAWING NUMBER	REVISION
			5D-00-A-500	14

9D-00A-901	PROCESS AREA PLOT PLAN
9D-00A-900	OVERALL MASTER PLAN

REFERENCE DRAWINGS

RF=Y2XCHP1DCN 02/02/2000

EQUIPMENT No.	F-550 (1)	K-550 (2)	G-554 (3)
DXX EQUIPMENT No.	No. 1	No. 1	No. 1
NAME	INCINERATOR FIRE BOX	INCINERATOR PREMIX BLOWER	INCINERATOR LIQUID FEED HOMOGENIZER
P.O. No.	F-051	F-051	
VENDOR DWG. No.			
MATERIAL	REFRACTORY WALL	C.S.	
SIZE	40'L.X14'.+X12'.-6"W	FRAME 56	1½'x1½'.
CAPACITY	35MM BTU/HR/6000 LB/HR	10'.8 SCFM/DEL (MIX)	10 GPM
DESIGN TEMP/PRESS	2000°F/14PSIA	120°F/8"WC	AMB.
OPER. TEMP/PRESS			
HP / # / RPM		1.00 BHP	7.5/4.43/3600
VENDOR	BICFLOW-LIPFAK	BALDOR	KINEMATICA
INSULATION	FIREBRICK	TEFC	

REVISIONS										
NO.	51	52	46	47	48	49	50			
DATE	07/17	10/21	06/10	07/11	08/11	12/16	01/14			
BY	TML	DAM	MRG	RXD	CCS	GAS	AD	WLG		
CHKD BY	SW	SW	MRG	CCS	CCS	CCS	MRG	AD	WLG	
APPR BY	SW	SW	CCS	CCS	CCS	CCS	CCS	MRG	AD	WLG
DATE	07/17	10/21	06/10	07/11	08/11	12/16	01/14			
NO. \ YEAR \ DESCRIPTION	REVISION PER MOC NO.2020867	REVISION PER MOC NO.20201564	REVISION PER MOC NO.20192505	REVISION PER MOC NO.20184930	REVISION PER MOC NO.20182678 WITH 2"-CHC-10R1	REVISION PER MOC NO.20182678 VCH & EDC MIDDLE AREA PWR 2012	REVISION PER MOC NO.20182678 WITH 2"-CHC-10R1			

DRAWN BY	VCM EQUIPMENT LIST
CHECKED BY	
APPROVED BY	

ENGINEERING FLOW DIAGRAM
INCINERATOR SYSTEM - CCIN-1
INCINERATOR FIRING CONTROLS

OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INCLESIDE, TEXAS

FILENAME 5DA021.DGN

REFERENCE DRAWINGS

ERB VOL.15 BOOK 1 (ORIG.) 5D-A-021
LINE DESIGNATION TABLE - 5AA-A-021

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EWR NUMBER	AFE NUMBER	AREA DESIGNATION	TYPE	SIZE	DRAWING NUMBER	REVISION
19611				D	5D-A-021	52

8633760DGN.P54

DETAIL "A"

DETAIL "B"

50-A-002 NOTE 10

ECC DECOMMISSIONING

4"x1. 5D-A-006

4"x1. 5D-A-026

4"x1. 5D-A-050

4"x1. 5D-A-022

4"x1. 5D-A-032

4"x1. 5D-A-019

4"x1. 5D-A-024

4"x1. 5D-A-002

4"x1. 5D-A-034

4"x1. 5D-A-036

4"x1. 5D-A-038

4"x1. 5D-A-040

4"x1. 5D-A-042

4"x1. 5D-A-044

4"x1. 5D-A-046

4"x1. 5D-A-048

4"x1. 5D-A-050

4"x1. 5D-A-052

4"x1. 5D-A-054

4"x1. 5D-A-056

4"x1. 5D-A-058

4"x1. 5D-A-060

4"x1. 5D-A-062

4"x1. 5D-A-064

4"x1. 5D-A-066

4"x1. 5D-A-068

4"x1. 5D-A-070

4"x1. 5D-A-072

4"x1.

RF=Y2XVCHPID2DGN 02/02/2000

CADD FILE NAME: 863376DGN.P55

EQUIPMENT No.	C-550	(1)	E-550	(2)
DRY EQUIPMENT No.				
NAME	WASTE HEAT BOILER STEAM DRUM		INCINERATOR WASTE HEAT RECOVERY BOILER	
P.O. No.	F-51		F-51	
VENDOR DWG. No.				
MATERIAL	C.S.		C.S./INCO 800 FERRULES	
SIZE	3'-6"DIA.X20'-8"		8.233 SQ.FT.	
CAPACITY	28,300 LBS/HR		29.27 MM BTU/HR	
TEMP/PRESS	650°F/300 PSIG		5+650°F/300 PSIG	
			T+2000°F/10 PSIG	
VENDOR	BIGELOW-LIPTAK		BIGELOW-LIPTAK	
HP / V / RPM				
INSULATION	4" H		3.5" H	

NOTE:

1. STUFFING BOX SHALL BE AIR PURGED TO PREVENT LEAKAGE. PURGE ACCESSORIES TO BE PROVIDED WITH CONTROL VALVE.
2. SEE DWG. DO-A-030 FOR ENGINEERING FLOW DIAGRAM SYMBOLOGY.
3. SEE COMPLEX LOOP DWG. NO. C-5048 FOR DCS SOFTWARE IMPLEMENTATION.
4. FOR COOLING WATER SUPPLY TO SC-501 USE LINE NO. 1"-C12C 5531 CW1.
5. FOR SAMPLE CONNECTION DETAILS REFER TO EFD'S 60-A-049, 050 & 051.

* ITEMS SUPPLIED BY INCINERATOR/BOILER VENDOR

NO.	DATE	BY	DWG \ YEAR \ DESCRIPTION
20	12/22	AR	REVISION PER MOC NO.20221208
19	11/16	AD	REVISION PER MOC NO.20141539
18	06/11	MRC	REVISION PER MOC NO.20110650

REVISIONS

REFERENCE DRAWINGS

ERB VOL.15 BOOK 1 (ORIG.) 5D-A-022
LINE DESIGNATION TABLE - 5AA-A-022

DRAWN BY	VCM EQUIPMENT LIST
CHECKED BY	
APPROVED BY	

ENGINEERING FLOW DIAGRAM
INCINERATION SYSTEM-CCIN-1
WASTE HEAT BOILER AND STEAM DRUM

OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INCLESIDE, TEXAS

FILENAME 5DA022.DGN

EWR NUMBER	AFE NUMBER	AREA DESIGNATION	TYPE	SIZE	DRAWING NUMBER	REVISION
19611				D	5D-A-022	20

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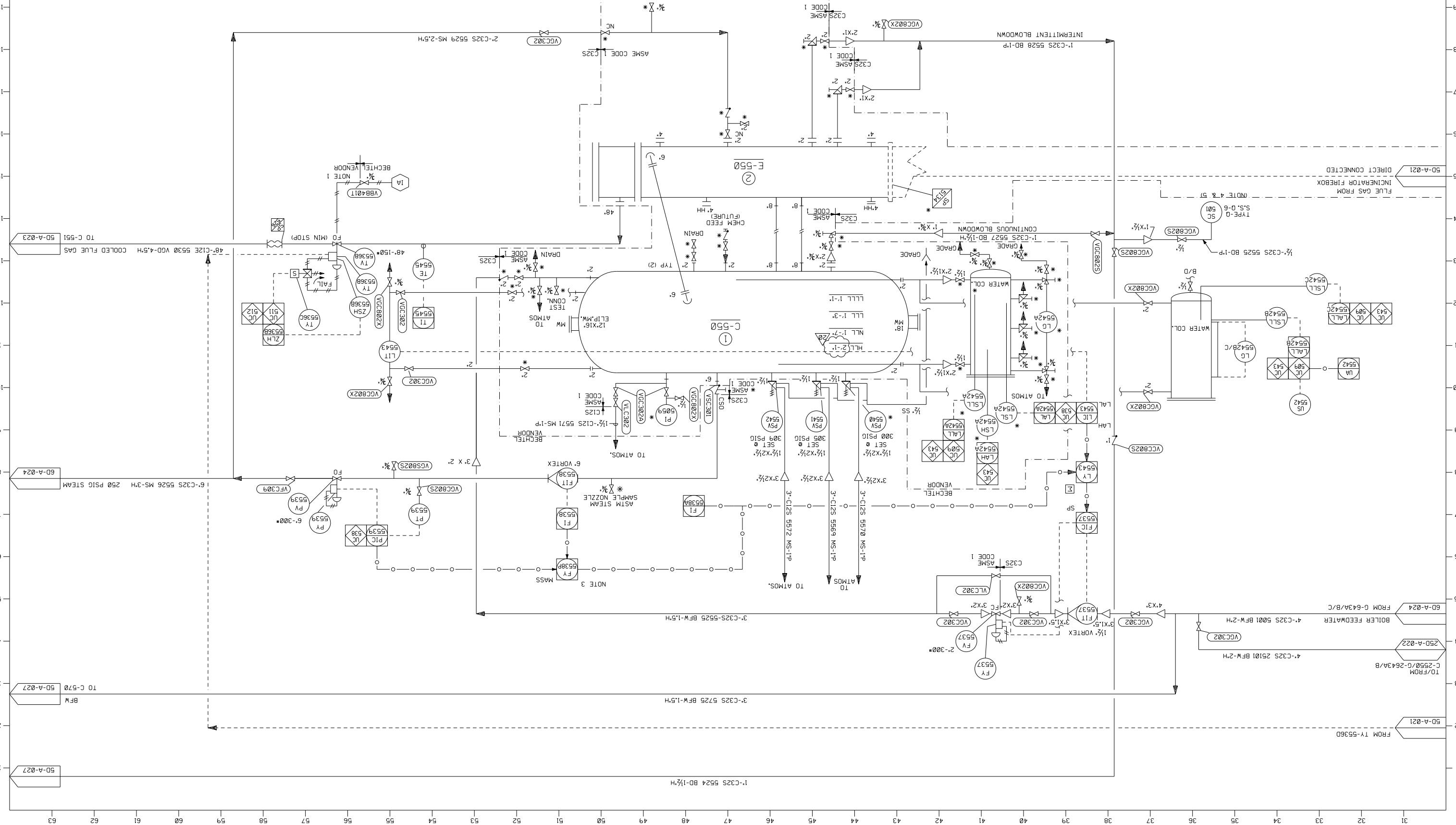
48"-C12E 5530 VGD-4.5"H COOLED FLUE GAS
TO C-551 5D-A-023
FO (MIN STOP)
48"-150#
TY 5536B
TY 5536E
TY 5536C
ZSH 5536B
ZLH 5536B
FAIL
S
VGC8028X
VGC3028
TE 5545
TI 5545
LIT 5543
VGC302
VGC802X
VGC802S
VBB401T
BECHTEL VENDOR
NOTE 1
1A
FO
6"-C32S 5526 MS-3"H 250 PSIG STEAM
6D-A-024
6"-300#
PY 5539
PV 5539
PIC 5538
PT 5539
VFC309
VGC802S
3" X 2"
6" VORTEX
FIT 5538
FI 5538
ASTM STEAM SAMPLE NOZZLE
FY 5538P
MASS
NOTE 3
3"-C12S 5572 MS-1"P
TO ATMOS.
3"-C12S 5569 MS-1"P
3"-C12S 5570 MS-1"P
FI 5538A
3"x2½"
PSV 5542 305 PSIG SET @ 309 PSIG
PSV 5541 305 PSIG SET @ 309 PSIG
PSV 5540 300 PSIG SET @ 304 PSIG
1½"x2½"
1½" SS
VSC302
VSC302X
VLC302
VGC802X
P1 5059
1½"-C12S 557I MS-1"P
BECHTEL VENDOR
ASME CODE 1
C12S
C32S
TO ATMOS.
1½"
LSL 5542A
LSH 5542A
LAL 5542A
LAH 5542A
LAL 5543 LIC 538 UC 509 LAL 5542A
LAH 5543 UC 509 LAL 5542A
LAH 5543 UC 543 LAH 5542A
LCB 5542A
LCB 5542A
LCB

RF:Y2XVCHPIDJDGN 02/02/2000

CADD FILE NAME: 86337GDGN.P56

EQUIPMENT No.	C-551 (1)	E-551 (2)	G-551A (3)	G-551B (4)
DWT EQUIPMENT No.				
NAME	ABSORPTION COLUMN	10% HCL COOLER	ACID RECYCLE AND TRANSFER PUMP	ACID RECYCLE AND TRANSFER PUMP
P.O. No.	C-22	E-02	G-01	G-01
VENDOR DWG. No.				
MATERIAL	FRP	GRAPHITE	TFE LINED	TFE LINED
SIZE	7'-6" I.D. x 50'-6"	346 SQ FT	4X31-13	4X31-13
CAPACITY	3235 GAL.	1.0X10 BTU/HR	600 GPM	600 GPM
DESIGN TEMP/PRESS	180°F/20 PSIG/50 WC	539°F/150 PSIG	139.72 PSIG	139.72 PSIG
OPER. TEMP/PRESS	113°F/150 PSIG			
CONSTRUCTION	STRAND COMPOSITES	CARBONE	DURCO	DURCO
HP / V / RPM	N/A	50/460/1750	1.5°P	1.5°P
INSULATION	NONE	T:1.5°P		

NOTES:
1. SEE DWG. 00-A-030 FOR ENGINEERING FLOW DIAGRAM SYMBOLOGY.
2. SEE COMPLEX LOOP DRAWINGS IN THE FOLLOWING TABLE FOR DCS SOFTWARE IMPLEMENTATION:

LOOP NO.	COMPLEX LOOP DWG. NO.
5878,5553	C-6048

3. SEE P&ID 60-A-049 FOR SAMPLE STATION DETAILS.
4. 4" TANTALUM INSERT 0.03" THK.

NO.	DESCRIPTION	BY	DATE
32	REVISION PER MOC NO. 20211545	AR	02/23
31	REVISION PER MOC NO. 20217795	TML	01/22
30	REVISION PER MOC NO. 20218010 PLANT PHR 2002	AD	JMD
29	REVISION PER MOC NO. 20212809 PLANT PHR 2002	GAS	JMD
28	REVISION PER MOC NO. 20201255 AS BUILT	RXD	MRG
27	REVISION PER MOC NO. 20200855	RXD	MRG
26	REVISION PER MOC NO. 20204089	RXD	MRG

REVISIONS

ERB VOL.15 BOOK 1 (ORIG.) 5D-A-023
LINE DESIGNATION TABLE - 5AA-A-023

REFERENCE DRAWINGS

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OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INCLESIDE, TEXAS

DRAWN BY
CHECKED BY
APPROVED BY

VCM EQUIPMENT LIST

ENGINEERING FLOW DIAGRAM
INCINERATION SYSTEM-CCIN-1
HCL ABSORBER AND ACID COOLER

FILENAME 5DA023.DGN

EWR NUMBER	AFE NUMBER	AREA DESIGNATION	TYPE	SIZE	DRAWING NUMBER	REVISION
19611				D	5D-A-023	32

COOLED FLUE GASES FROM E-550 — 5D-A-022

48 "C12E 5530 VGD-3"H

62'X48" 62.10 REFRACTORY LINED 50 FF

MAX. LIQ. LEVEL 1 FT. BELOW THIS POINT

NOTE 5

SHUTDOWN LLL 1'-0" NLL 4'-0" HLL 9'-6" 8'-6" 10'

48" 14" 24" MW

SEE DETAIL 'B' OF DWG. 5D-A-032

1"KYNAR PIPE TO PAD

2"-0108 5535 HCL-1"P

2"-0108 5536 HCL-1"P

2"x1½" 1½" MAG

2"-0108 5537 HCL-1"P

4"-0108 5538 HCL-1"P

8"-0108 5541 HCL-1"P

6"-0108 5542 HCL-1"P

6"-0108 5540 HCL-1"P

4"-0108 5539 HCL-1"P

4"-0108 5548 HCL-1"P

4"-0108 5537 HCL-1"P

6"x4"

6"x3"

4"x2"

3"x2"

3"x1½"

3"x4"

1½" MAG

4" MAG

3"-0108 5545 HCL-1"P

3"-0108 5546 HCL

3"-0108 5580 HCL

3"-0108 5547 HCL

3"-0108 5547 HCL

1"-0108 5989 HCL

10% HCL TO D-590

4"-0108 5539 HCL-1"P

4"-C12C 5549 CWS

4"-C12C 5548 CWI

4"-150#

1½"-150#

3"-150#

6"-0108 5536 HCL

C-551 (1)

E-551 (2)

G-551A (3)

G-551B (4)

5'-6" ABOVE THE T-LINE

VENT

TO SUMP

DROP OUT SPOOL

TO PAD

TUBING

C12C

C12B

C12D

C12F

4"-C12C 5569 SFW

4"-C12C 5570 SFW

4"-C12C 5599 TW

4"-C12C 5594 TW

4"-C12C 5597 CWS

4"-C12C 5596 TW

4"-C12B 5595 FW

4"-C12C 5536 TW

4"-C12B 5536 FW

3"-C12C 5502 SFW

3"-C12F 5533 EFW

42"-FRP 5534 VGW (BY VENDOR)

TO C-552

FROM C-552

FROM E-571

FROM G-553 A/B

BLOWDOWN FROM CAUSTIC SCRUBBER

TREATED WATER FROM HEADER

PRIMARY BACKUP SUPPLY

FIREWATER

COOLING WATER BLOWDOWN

PAL

PAH

LAL

LAH

LAHH

TAH

TAHH

LSHH

LSLL

FAL

FAH

FAHH

PSV 5492

PSV 5493

PSV 5494

PSV 5495

PSV 5496

PSV 5497

PSV 5498

PSV 5499

PSV 5500

PSV 5501

PSV 5502

PSV 5503

PSV 5504

PSV 5505

PSV 5506

PSV 5507

PSV 5508

PSV 5509

PSV 5510

PSV 5511

PSV

RF=YZWCHPIDDGN 02/02/2000

EQUIPMENT No.	C-552	C-553	G-552A	G-552B	G-553A	G-553B	E-552A	E-552B
DWT EQUIPMENT No.	①	②	③	④	⑤	⑥	⑦	⑧
NAME	DEHUMIDIFIER COLUMN	CAUSTIC SCRUBBER	DEHUMIDIFIER WATER SUPPLY PUMP	DEHUMIDIFIER WATER SUPPLY PUMP	DEHUMIDIFIER RETURN WATER PUMP	DEHUMIDIFIER RETURN WATER PUMP	DEHUMIDIFIER BOTTOMS COOLERS	DEHUMIDIFIER BOTTOMS COOLER
P.O. No.	D-04	D-04	G-01	G-01	G-01	G-01	E-41	E-41
VENDOR DWG. No.	22							
MATERIAL	FRP	FRP/100 GAL.	ALLOY 20	ALLOY 20	ALLOY 20	ALLOY 20	T1	T1
SIZE	6'-0"DIA X 33'6"	4'X6'-18	4'X6'-18	4'X6'-18	4'X6'-18	4'X6'-18	495 SQ. FT.	495 SQ. FT.
CAPACITY	22	6800 GAL	1150 GPM	1150 GPM	1150 GPM	1150 GPM	3.28X10⁶BTU/HR	3.28X10⁶BTU/HR
DESIGN TEMP/PRESS	150°F/50" WC	175°F/-50" WC	103°F/115PSIG	103°F/115PSIG	103°F/115PSIG	103°F/115PSIG	140°F/150PSIG	140°F/150PSIG
OPER. TEMP/PRESS	N/A	125/4/60/1800	125/4/60/1800	125/4/60/1800	125/4/60/1800	125/4/60/1800		
HP / V / RPM		N/A						
VENDOR	STRAND COMPOSITES	MESH PLASTICS	COOLCS	COOLCS	COOLCS	COOLCS	APV CREPCO	APV CREPCO
INSULATION	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

NOTES:
1. ALL VALVES ON FRP LINES WILL BE CPVC.
2. ANALYZER SAMPLE POINT TAKE OFF SHOULD BE 1½"-150 LB. FLANGE PER EFDS 60-A-042, SEC. ANALYZER RETURN POINT SHOULD BE 1" FLANGED VALVE.
3. SEE DWG. 00-A-030 FOR ENGINEERING FLOW DIAGRAM SYMBOLOGY.
4. FOR SAMPLE CONNECTION DETAILS REFER TO EFDS 60-A-042, 050 & 051. USE FOLLOWING LINE NOS. FOR SAMPLE CONNECTIONS
SC-5034: ¾"-C18F 5581 EFW
SC-5041: ¾"-C18F 5582 EFW
5. INSULATE FOR FREEZE PROTECTION.
6. SEE COMPLEX LOOP DWG. C-533B FOR DCS SOFTWARE IMPLEMENTATION.
7. PULL INSERTED POINTING IN FLOW DIRECTION.

NO.	DATE	BY	REVISION PER MOC NO.
22	03/30	UC	REVISION PER MOC NO. 20021692
21	11/16	CHR	REVISION PER MOC NO. 20021562
20	07/12	MAR	REVISION PER MOC NO. 20010874
19	08/11	RGS	REVISION PER MOC NO. 20010874
18	02/10	RKD	REMOVE SP TAG NO. OFF 5590 EFW LINE PER AS BUILT REQUEST
17	08/06	MRG	REVISION PER MOC NO. 20050954
16	09/06	RKD	REVISION PER TEAR \ DESCRIPTION
NO.	DATE	BY	MOC \ TEAR \ DESCRIPTION

REVISIONS

ERB VOL.15 BOOK 1 (ORIG.) 5D-A-0-024
LINE DESIGNATION TABLE - 5AA-A-024

REFERENCE DRAWINGS

OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INCLESIDE, TEXAS

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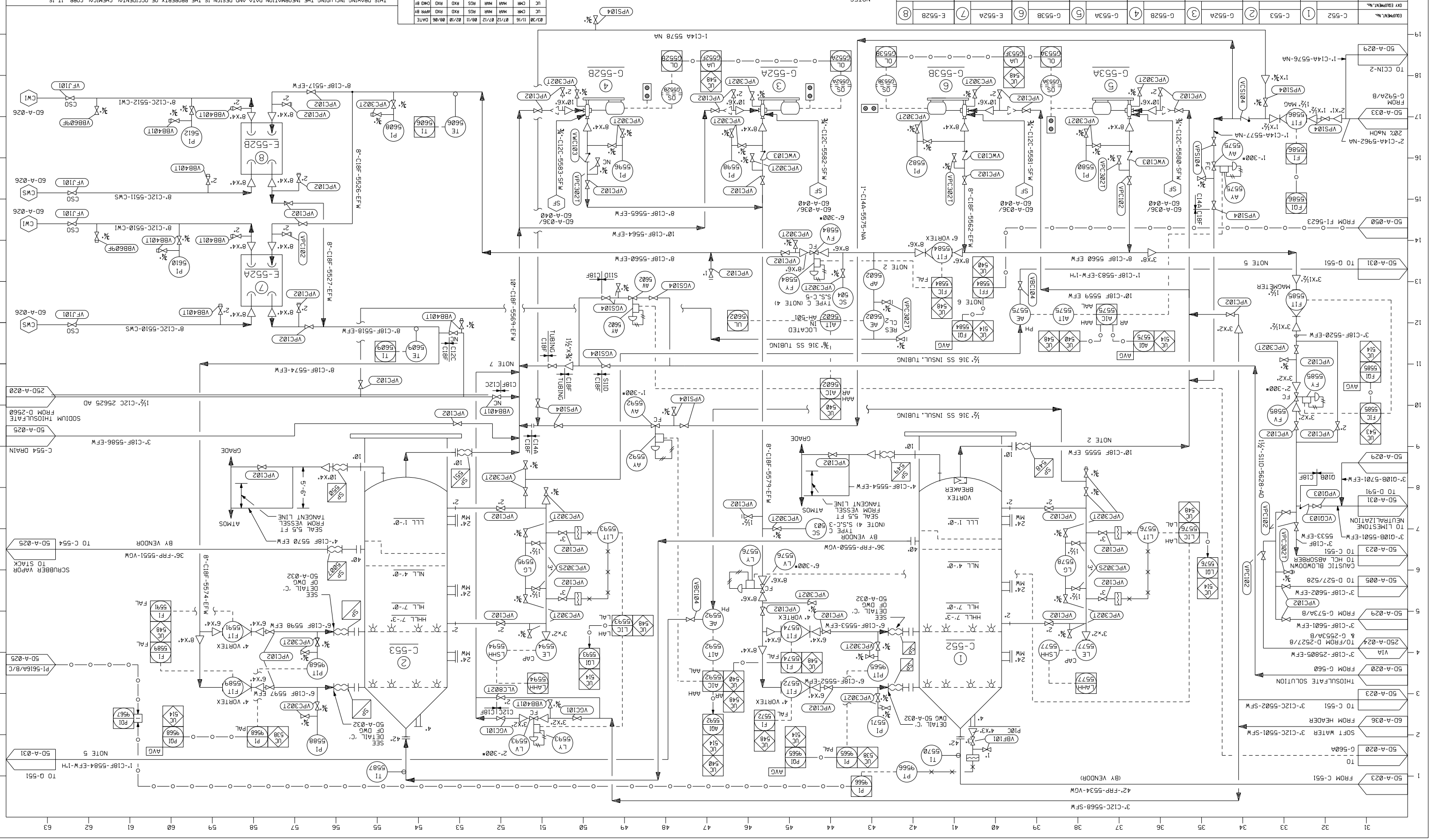
DRAWN BY	VCM EQUIPMENT LIST
CHECKED BY	
APPROVED BY	

ENGINEERING FLOW DIAGRAM
INCINERATION SYSTEM - CCIN-1
D/H COLUMN AND CAUSTIC SCRUBBER

FILENAME 50A024.DGN

EWR NUMBER	AFE NUMBER	AREA DESIGNATION	TYPE	SIZE	DRAWING NUMBER	REVISION
				D	5D-A-024	22


C-552
C-553
C-552A
C-552B
C-553A
C-553B
E-552A
E-552B
G-552A
G-552B
G-553A
G-553B
DEHUMIDIFIER COLUMN
CAUSTIC SCRUBBER
DEHUMIDIFIER WATER SUPPLY PUMP
DEHUMIDIFIER RETURN WATER PUMP
DEHUMIDIFIER BOTTOMS COOLERS
DEHUMIDIFIER BOTTOMS COOLER
FROM C-551
SOFT WATER 3"-C12C-5501-SFW
FROM HEADER 6D-A-036
FROM G-560 5D-A-020
THIOSULFATE SOLUTION 10/FROM D-2527/8 & G-2553A/B 25D-A-024
VIA 3"-C18F-25805-EFW
FROM G-573A/B 5D-A-029
3"-C18F-5601-EFW
TO LINESTONE NEUTRALIZATION 3"-D10B-5501-EFW
CAUSTIC BLOWDOWN TO HCL ABSORBER 3"-C18F 5533-EFW
TO C-551 5D-A-023
TO D-527/528 5D-A-005
3"-C18F-5602-EFW
FROM G-573A/B 5D-A-029
TO D-591 5D-A-031
3"-D10B-5701-EFW
TO C-551 5D-A-023
TO CCIN-2 5D-A-029
FROM G-592A/B 5D-A-033
2"-C14A-5962-NA 20% NaOH
1"-C14A-5576-NA
1"-C14A-5577-NA
FROM FI-5623 5D-A-050
TO O-551 5D-A-031
MAGMETER
3"-C18F-5520-EFW
3"-C18F-5583-EFW-I'M
10"-C18F 5559 EFW
NOTE 5
NOTE 2
NOTE 6
NOTE 7
10"-C18F 5555 EFW
10"-C18F 5560 EFW
8"-C18F 5562-EFW
8"-C18F-5574-EFW
8"-C18F-5575-EFW
8"-C18F-5576-EFW
8"-C18F-5626-EFW
8"-C18F-5627-EFW
8"-C18F-5628-AD
1½"-S11D-5628-AD
1"-C14A 5578 NA
1"-C14A 5575 NA
1"-C14A 5576 NA
1"-C14A 5577 NA
1"-C12C-5580-SFW
1"-C12C-5581-SFW
1"-C12C-5582-SFW
1"-C12C-5583-SFW
1"-C12C-5584-SFW
1"-C12C-5585-SFW
1"-C12C-5586-SFW
1"-C12C-5587-SFW
3"-C12C-5588-SFW
3"-C12C-5589-SFW
3"-C12C-5590-SFW
3"-C12C-5591-SFW
3"-C12C-5592-SFW
3"-C12C-5593-SFW
3"-C12C-5594-SFW
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3"-C12C-5597-SFW
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3"-C12C-5599-SFW
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3"-C12C-5609-SFW
3"-C12C-5610-SFW
3"-C12C-5611-SFW
3"-C12C-5612-SFW
3"-C12C-5613-SFW
3"-C12C-5614-SFW
3"-C12C-5615-SFW
3"-C12C-5616-SFW
3"-C12C-5617-SFW
3"-C12C-5618-SFW
3"-C12C-5619-SFW
3"-C12C-5620-SFW
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3"-C12C-5624-SFW
3"-C12C-5625-SFW
3"-C12C-5626-SFW
3"-C12C-5627-SFW
3"-C12C-5628-SFW
3"-C12C-5629-SFW
3"-C12C-5630-SFW
3"-C12C-5631-SFW
3"-C12C-5632-SFW
3"-C12C-5633-SFW
3"-C12C-5634-SFW
3"-C12C-5635-SFW
3"-C12C-5636-SFW
3"-C12C-5637-SFW
3"-C12C-5638-SFW
3"-C12C-5639-SFW
3"-C12C-5640-SFW
3"-C12C-5641-SFW
3"-C12C-5642-SFW
3"-C12C-5643-SFW
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3"-C12C-5646-SFW
3"-C12C-5647-SFW
3"-C12C-5648-SFW
3"-C12C-5649-SFW
3"-C12C-5650-SFW
3"-C12C-5651-SFW
3"-C12C-5652-SFW
3"-C12C-5653-SFW
3"-C12C-5654-SFW
3"-C12C-5655-SFW
3"-C12C-5656-SFW
3"-C12C-5657-SFW
3"-C12C-5658-SFW
3"-C12C-5659-SFW
3"-C12C-5660-SFW
3"-C12C-5661-SFW
3"-C12C-5662-SFW
3"-C12C-5663-SFW
3"-C12C-5664-SFW
3"-C12C-5665-SFW
3"-C12C-5666-SFW
3"-C12C-5667-SFW
3"-C12C-5668-SFW
42"-FRP-5534-VGW
36"-FRP-5550-VGW
36"-FRP-5551-VGW
4"-C18F 5570 EFW
4"-C18F-5554-EFW
4"-C18F-5555-EFW
4"-C18F-5556-EFW
4"-C18F-5557-EFW
4"-C18F-5558-EFW
4"-C18F-5559-EFW
4"-C18F-5560-EFW
4"-C18F-5561-EFW
4"-C18F-5562-EFW
4"-C18F-5563-EFW
4"-C18F-5564-EFW
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4"-C18F-5566-EFW
4"-C18F-5567-EFW
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4"-C18F-5569-EFW
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4"-C18F-5573-EFW
4"-C18F-5574-EFW
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4"-C18F-5576-EFW
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4"-C18F-5693-EFW
4"-C18F-5694-EFW
4"-C18F-5695-EFW
4"-C18F-5696-EFW
4"-C18F-5697-EFW
4"-C18F-5698-EFW
4"-C18F-5699-EFW
4"-C18F-5700-EFW
4"-C18F-5701-EFW
1½"-C12C 2562S AD
SODIUM THIOSULFATE FROM D-2560
1½"-C12C 2562S AD
3"-C18F-5586-EFW
C-554 DRAIN
SCRUBBER VAPOR TO STACK
TO C-554
BY VENDOR
SEAL 5.5 FT FROM VESSEL TANGENT LINE
ATMOS
GRADE
LLL 1'-0"
NLL 4'-0"
HLL 7'-0"
HHLL 7'-3"
C-553
C-552
E-552B
E-552A
G-552B
G-552A
G-553B
G-553A
VORTEX
BREAKER
TYPE C (NOTE 4)
SC 503
SC 504
TYPE C (NOTE 4)
SS, S.C-5
LOCATED AT-50'
DETAIL 'C' DWG 50-A-032
SEE DETAIL 'C' DWG 50-A-032
SEE DETAIL 'C' OF DWG 50-A-032
6-C18F 5598 EFW
6-C18F 5597 EFW
6-C18F-5552-EFW
6-C18F-5553-EFW
6-C18F-5554-EFW
6-C18F-5555-EFW
6-C18F-5556-EFW
6-C18F-5557-EFW
6-C18F-5558-EFW
6-C18F-5559-EFW
6-C18F-5560-EFW
6-C18F-5561-EFW
6-C18F-5562-EFW
6-C18F-5563-EFW
6-C18F-5564-EFW
6-C18F-5565-EFW
6-C18F-5566-EFW
6-C18F-5567-EFW
6-C18F-5568-EFW
6-C18F-5569-EFW
6-C18F-5570-EFW
6-C18F-5571-EFW
6-C18F-5572-EFW
6-C18F-5573-EFW
6-C18F-5574-EFW
6-C18F-5575-EFW
6-C18F-5576-EFW
6-C18F-5577-EFW
6-C18F-5578-EFW
6-C18F-5579-EFW
6-C18F-5580-EFW
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6-C18F-5582-EFW
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6-C18F-5584-EFW
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6-C18F-5592-EFW
6-C18F-5593-EFW
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6-C18F-5688-EFW
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6-C18F-5691-EFW
6-C18F-5692-EFW
6-C18F-5693-EFW
6-C18F-5694-EFW
6-C18F-5695-EFW
6-C18F-5696-EFW
6-C18F-5697-EFW
6-C18F-5698-EFW
6-C18F-5699-EFW
6-C18F-5700-EFW
6-C18F-5701-EFW
1"-C14A-5575-NA
1"-C14A-5576-NA
1"-C14A-5577-NA
1"-C14A-5578 NA
2"-C14A-5962-NA 20% NaOH
1"-C12C-5580-SFW
1"-C12C-5581-SFW
1"-C12C-5582-SFW
1"-C12C-5583-SFW
1"-C12C-5584-SFW
1"-C12C-5585-SFW
1"-C12C-5586-SFW
1"-C12C-5587-SFW
3"-C12C-5588-SFW
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3"-C12C-5664-SFW
3"-C12C-5665-SFW
3"-C12C-5666-SFW
3"-C12C-5667-SFW
3"-C12C-5668-SFW
42"-FRP-5534-VGW
36"-FRP-5550-VGW
36"-FRP-5551-VGW
4"-C18F 5570 EFW
4"-C18F-5554-EFW
4"-C18F-5555-EFW
4"-C18F-5556-EFW
4"-C18F-5557-EFW
4"-C18F-5558-EFW
4"-C18F-5559-EFW
4"-C18F-5560-EFW
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4"-C18F-5562-EFW
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4"-C18F-5569-EFW
4"-C18F-5570-EFW
4"-C18F-5571-EFW
4"-C18F-5572-EFW
4"-C18F-5573-EFW
4"-C18F-5574-EFW
4"-C18F-5575-EFW
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4"-C18F-5600-EFW
4"-C18F-5601-EFW
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4"-C18F-5615-EFW
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4"-C18F-5671-EFW
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4"-C18F-5674-EFW
4"-C18F-5675-EFW
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4"-C18F-5680-EFW
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4"-C18F-5692-EFW
4"-C18F-5693-EFW
4"-C18F-5694-EFW
4"-C18F-5695-EFW
4"-C18F-5696-EFW
4"-C18F-5697-EFW
4"-C18F-5698-EFW
4"-C18F-5699-EFW
4"-C18F-5700-EFW
4"-C18F-5701-EFW
1½"-C12C 2562S AD
SODIUM THIOSULFATE FROM D-2560
1½"-C12C 2562S AD
3"-C18F-5586-EFW
C-554 DRAIN
SCRUBBER VAPOR TO STACK
TO C-554
BY VENDOR
SEAL 5.5 FT FROM VESSEL TANGENT LINE
ATMOS
GRADE
LLL 1'-0"
NLL 4'-0"
HLL 7'-0"
HHLL 7'-3"
C-553
C-552
E-552B
E-552A
G-552B
G-552A
G-553B
G-553A
VORTEX
BREAKER
TYPE C (NOTE 4)
SC 503
SC 504
TYPE C (NOTE 4)
SS, S.C-5
LOCATED AT-50'
DETAIL 'C' DWG 50-A-032
SEE DETAIL 'C' OF DWG 50-A-032
SEE DETAIL 'C' DWG 50-A-032
6-C18F 5598 EFW
6-C18F 5597 EFW
6-C18F-5552-EFW
6-C18F-5553-EFW
6-C18F-5554-EFW
6-C18F-5555-EFW
6-C18F-5556-EFW
6-C18F-5557-EFW
6-C18F-5558-EFW
6-C18F-5559-EFW
6-C18F-5560-EFW
6-C18F-5561-EFW
6-C18F-5562-EFW
6-C18F-5563-EFW
6-C18F-5564-EFW
6-C18F-5565-EFW
6-C18F-5566-EFW
6-C18F-5567-EFW
6-C18F-5568-EFW
6-C18F-5569-EFW
6-C18F-5570-EFW
6-C18F-5571-EFW
6-C18F-5572-EFW
6-C18F-5573-EFW
6-C18F-5574-EFW
6-C18F-5575-EFW
6-C18F-5576-EFW
6-C18F-5577-EFW
6-C18F-5578-EFW
6-C18F-5579-EFW
6-C18F-5580-EFW
6-C18F-5581-EFW
6-C18F-5582-EFW
6-C18F-5583-EFW
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6-C18F-5594-EFW
6-C18F-5595-EFW
6-C18F-5596-EFW
6-C18F-5597-EFW
6-C18F-5598-EFW
6-C18F-5599-EFW
6-C18F-5600-EFW
6-C18F-5601-EFW
6-C18F-5602-EFW
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6-C18F-5611-EFW
6-C18F-5612-EFW
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6-C18F-5614-EFW
6-C18F-5615-EFW
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6-C18F-5686-EFW
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6-C18F-5693-EFW
6-C18F-5694-EFW
6-C18F-5695-EFW
6-C18F-5696-EFW
6-C18F-5697-EFW
6-C18F-5698-EFW
6-C18F-5699-EFW
6-C18F-5700-EFW
6-C18F-5701-EFW
1"-C14A-5575 NA
1"-C14A-5576 NA
1"-C14A-5577 NA
1"-C14A 5578 NA
2"-C14A-5962-NA 20% NaOH
1"-C12C-5580-SFW
1"-C12C-5581-SFW
1"-C12C-5582-SFW
1"-C12C-5583-SFW
1"-C12C-5584-SFW
1"-C12C-5585-SFW
1"-C12C-5586-SFW
1"-C12C-5587-SFW
3"-C12C-5588-SFW
3"-C12C-5589-SFW
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3"-C12C-5598-SFW
3"-C12C-5599-SFW
3"-C12C-5600-SFW
3"-C12C-5601-SFW
3"-C12C-5602-SFW
3"-C12C-5603-SFW
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3"-C12C-5637-SFW
3"-C12C-5638-SFW
3"-C12C-5639-SFW
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3"-C12C-5650-SFW
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3"-C12C-5655-SFW
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3"-C12C-5659-SFW
3"-C12C-5660-SFW
3"-C12C-5661-SFW
3"-C12C-5662-SFW
3"-C12C-5663-SFW
3"-C12C-5664-SFW
3"-C12C-5665-SFW
3"-C12C-5666-SFW
3"-C12C-5667-SFW
3"-C12C-5668-SFW
42"-FRP-5534-VGW
36"-FRP-5550-VGW
36"-FRP-5551-VGW
4"-C

36"-FRP 5585 VGW
(BY VENDOR)

5D-A-024

36"

2" SPARE

2" SPARE

② C-554

SCRUBBER VAPOR
5D-A-024
FROM C-553

36"-FRP 5551 VGW
(BY VENDOR)

40"

VPC302T ¾"

VPC102 2" 2"

NOTE 1

LG 5651

VPC102 2" 2"

VPC302T ¾"

24" MW

SP 5008T

3"

C-554 DRAIN
5D-A-024
TO G-552 A/B

3"-C18F 5586 EFW
(GRAVITY FLOW)

TO AY-5626
5D-A-050

UC 543 PDAH
PDIC 5614
PDAL

PDY 5614

S.C.

24"X16" FO

16"

24"X16"

24"-FRP 5587 VGW
BY VENDOR

PDV 5614 16"-150#

PDT 5614

36"-FRP 5511 VGW
NOTE 3

TEFLON TUBING (NO POCKET)

22

VBF101 1"

UC 543 UC 509 UC 510 PI 5616B

PT 5616B 1" CSO

VBF101

PT 5616A PAH PAL

UC 543 UC 509 UC 510 PI 5616A

PAC

VBF101

PT 5616C 1" CSO

VBF101

UC 543 UC 509 UC 510 PI 5616C

TRANSITION PIECE
(14"X23" BLOWER OUTLET TO
28"X40" TRANSITION PIECE).

TRANSITION PIECE TO 13"X49" BLOWER INLET

SP 557

VBP102

LOCATE SAME ELEVATION

TE 5621

TI 5621

SP 558

VE 5833A

TE 5834B TE 5834A

TI 5834 TAH

SPARE

VAH 5833

VSH 5833 VI 5833

VE 5833B

TE 5618A

TE 5618B SPARE

SP 5008B

PI 5020A PCV 5019A PI 5020B

TI 5618 TAH

1A
6D-A-028

FI 5020B

FI 5020A

1"-D10B 5592 HCL

1"-D10B 5593 HCL

M

3 IT 5619

II 5619A LOCATE IN MCC

II 5619B UC 543

K-551

OS K-551

ST

UC 543 SP SP
OLC K551 OC K551P OC K551L UC 509 UC 510

UC 509
UL 5510

K-551 BLOWER PERMISSIVE SD

SP 5007 ¾"

SP 5008 ¾"

TE 5847A TE 5847B

TI 5847 TAH

VBB401T ¾"

1"X¾"

1"-C12C 5590 CWS SPARE

FI 5620 1"

VBB401T

CWS 6D-A-026

1"-C12C 5570 CWI

1"-C12C 5591 CWI

CWI 6D-A-026

¾"

VBB401T

VENT

2'-0"

SEAL

1"-P10C-5521-EFW

1"-P10C-5522-EFW

VBF101 P10C

VENT

2'-0"

SEAL

1"-C12C 5570 CWI

K551 BRNG OB

FI 5617

VBB401T

VBB401T

VBB401T

P10C

1" VBF101

FICV 9607 1"

VBB609F

FICV 9606 1"

VBB609F

* ITEMS SUPPLIED WITH EQUIPMENT.

28"X40"-FRP 5588 VGW (BY VENDOR)

1"-C12C-5522-SFW

30"x36"

36"-FRP 5512 VGW
NOTE 3

30"

LOCATE SAMPLE CONNECTIONS 90° APART

UC 509 HS 9629

HY 9629

HV 9629

Ø.5 DIAMETERS MINIMUM

VBF101

4"

VBF101

A/S

FICV 9627

FC

1" 1"X½"

VBB401T

SP 525

6"

PI 9625

PCV 9624

HY 9626

HV 9626

1"-C12A-5011-UA

UA
6D-A-027

VBB401T

(FILTER)

SP 527

30"-FRP 5512 VGW

UC 552 UC 514 UC 540

AI 9512

Ø2

AIT 9512

AE 9512

3" 300# WITH ONE BOLT HOLE AT 12 O'CLOCK

PY 9515B

PHS 9515

PI 9515B

PY 9515A

PI 9515A

PT 9515B

PT 9515A

VBF101

VBF101

VENT

VACUUM BREAKER

VBF101

1"-C12C-5520-SFW

FICV 9600

VBB609F

SFW
6D-A-036

P10C C12C

3"

30" MIN

SEAL

3"-P10C-5519-EFW

TO GRADE

¾"

1"-C12C-5521-SFW

PIC-9515
5D-A-047

TO WESP
5D-A-047

NOTES:

1. NORMAL LEVEL AT C-554 MUST BE ABOVE NORMAL LEVEL AT C-553.
2. SEE DWG. OD-A-030 FOR ENGINEERING FLOW DIAGRAM SYMBOLOGY.
3. ATTACHMENT PIPING FOR VGH IS C12F AND FOR VGW IS P10C.

DESCRIPTION			①	②	③
	EQUIPMENT No.			C-554	K-551
	DXY EQUIPMENT No.				
	NAME			VENT STACK KNOCK-OUT DRUM	VENT DRAFT BLOWER
	P.O. No.			D-04	K-06
	VENDOR DWG. No.				
	MATERIAL			FRP	HAST ROTOR/FRP CASE
	SIZE			6'I.D.X10'-0"TT	
	CAPACITY			1978 GAL	17600 ACFM
	DESIGN TEMP/PRESS			175°F/-50" WC	175°F/1 PSIG
	OPER. TEMP/PRESS				
	HP / V / RPM			N/A	150/480/1780
	VENDOR			MESH PLASTICS	BUFFALO FORGE
	INSULATION			NONE	NONE

NO.	DESCRIPTION	BY	DATE
22	AS-BUILT PER MOC NO.20200295	TML	02/20
21	REVISION PER MOC NO.20120898 VCM & EDC MIDDLE AMEA PHR 2012	JMD	12/16
20	REVISION PER MOC NO.	MRG	02/10
19	REVISION PER TEAR NO.20090134	MRG	08/06
18	REVISION PER TEAR NO.20050858	MRG	05/05
17	REVISED LINE PER AS BUILT	MRG	02/03
	MOC \ TEAR \ DESCRIPTION	APPR BY / DWG BY	DATE

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REFERENCE DRAWINGS

ERB VOL.15 BOOK 1 (ORIG.) 5D-A-025
LINE DESIGNATION TABLE - 5AA-A-025

DRAWN BY
CHECKED BY
APPROVED BY

VCM EQUIPMENT LIST

OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INGLESIDE, TEXAS

FILENAME 5DA025.DGN

ENGINEERING FLOW DIAGRAM
INCINERATION SYSTEM - CCIN-1
KNOCK-OUT DRUM, FAN AND STACK

EWR NUMBER	AFE NUMBER	AREA DESIGNATION	TYPE	SIZE	DRAWING NUMBER	REVISION
	19611			D	5D-A-025	22

RF=Y2KVCMPID.DGN 02/02/2000

RF=Y2XCHP1D.DGN 02/02/2000

EQUIPMENT No.	Y-550	(1)	PTR-550	(2)	K-552	(3)	Y-552	(4)	D-550	(5)	G-556A	(6)	G-556B	(7)
PLANT ID.														
NAME:	WESP (WET ELECTROSTATIC PRECIPITATOR)		WESP TRANSFORMER/ RECTIFIER		WESP PURGE AIR BLOWER		WESP PURGE AIR BLOWER FILTER		WESP WATER DRAIN TANK		WESP WATER RETURN PUMP No.1		WESP WATER RETURN PUMP No.2	
P.O. No.:														
DWG. No.:														
MATERIAL:	HET FR 992/HAST C		FRP						DERAKANE 411		ALLOY 20		ALLOY 20	
SIZE:	12'DIA×41'				1000 CFM		7'DIA×8'		2300 GAL		20 GPM, 118'		20 GPM, 118'	
CAPACITY:	20000 ACFM		84kW											
TEMP/PRESS:	180°F/-40/-30 IN WC				/-3.5 IN WC		LF3196 1X1.5-8		LF3196 1X1.5-8		LF3196 1X1.5-8		LF3196 1X1.5-8	
HP/V/RPM:	MODEL 1013-121				3/460/1800				5/460/3600		5/460/3600		5/460/3600	
WEIGHT:														
VENDOR:	OCCIDENTAL		OCCIDENTAL		OCCIDENTAL/ HART2ELL		OCCIDENTAL		AUGUSTA FIBROCLASS		ITT GOULDS		ITT GOULDS	

NOTES:
1. ATTACHMENT PIPING FOR VGH IS C12F AND FOR VGW IS P10C.
2. LOCATE LG-9605 SO THAT IT READS THE LEVEL IN THE SEAL LEG (WHERE IT BENDS TO RUN TO D-550).
3. HEATER ELEMENT CONTROL IS WIRED TO THE PURGE AIR BLOWER STARTER. THE ELEMENTS COME ON AND STAY ON WHEN THE BLOWER IS RUNNING.
4. K1-9513 (WAIT TIMER) COMMON TO BOTH WASH SEQUENCES.
5. 2 OUT OF 3 VOTING LOGIC.

NO.	DESCRIPTION	DATE	BY
9	REVISION AS PER MOD. 20032323	11/16	AO
8	REVISION PER MOD. NO. 20020867	06/12	MRG
7	REVISION PER MOD. NO. 20000805	02/10	MRG

REVISIONS

LINE DESIGNATION TABLE - 5AA-A-047

REFERENCE DRAWINGS

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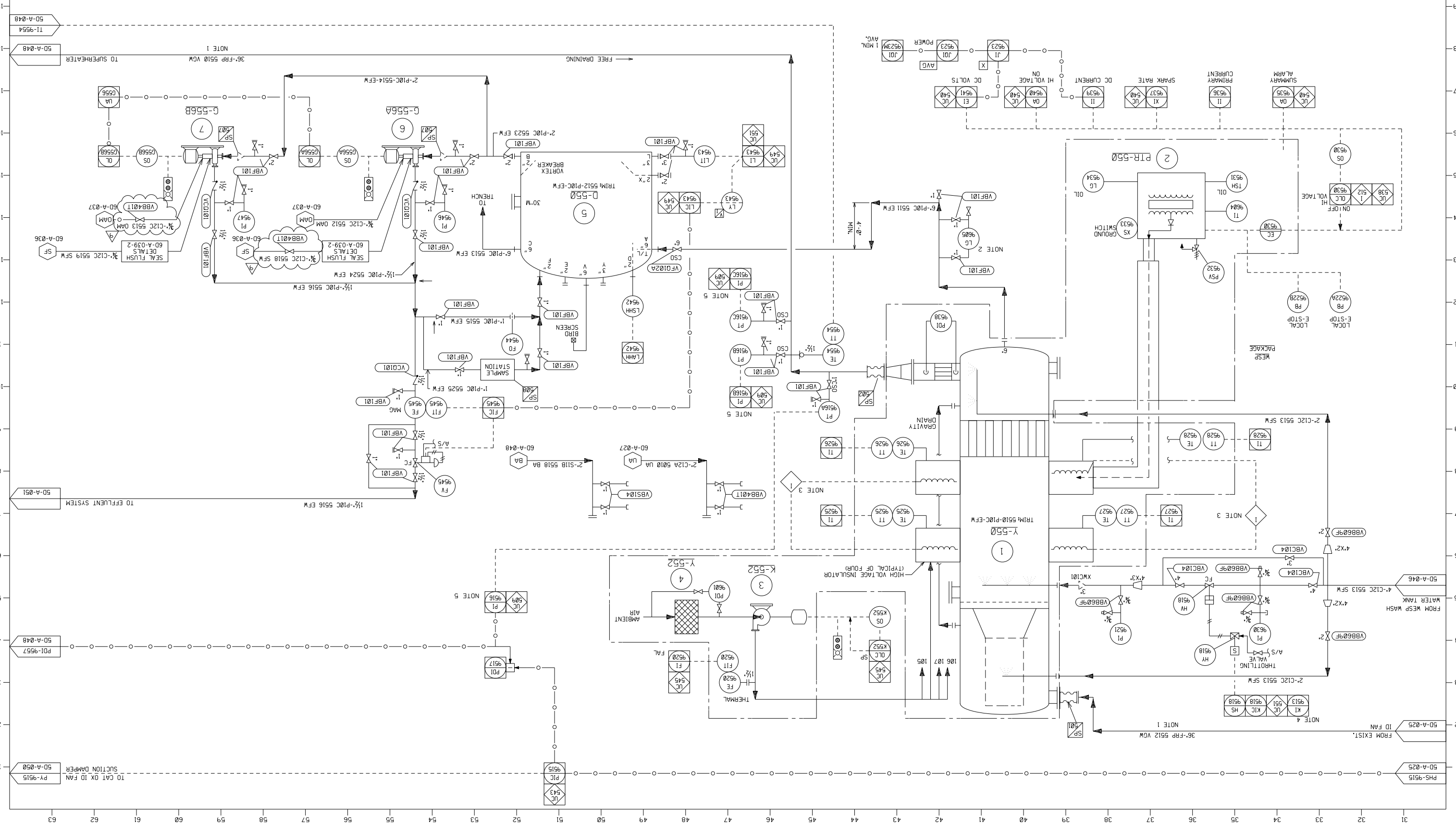
OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INGLESIDE, TEXAS

FILENAME 50A047.DGN

ENGINEERING FLOW DIAGRAM
CCIN-1

DRAWN BY	VCM EQUIPMENT LIST	EAR NUMBER	
CHECKED BY		AFE NUMBER	
APPROVED BY		AREA DESIGNATION	
		TYPE	
		SIZE D	
		DRAWING NUMBER 50-A-047	
		REVISION 9	


FREE DRAINING
36"-FRP 5510 VGW
NOTE 1
TO SUPERHEATER
T1-9554
50-A-048
2"-P10C-5514-EFW
G-556B
G-556A
7
6
SP507
VBF101
VBB401T
VBB401T
VBB401T
VCD101
VCD101
VCD101

RF:Y2XVCHP1D.DGN 02/02/2000

EQUIPMENT No.	D-561	G-561A (2)	G-561B (3)
PLANT ID.			
NAME:	WESP WASH WATER TANK	WESP WASH PUMP No.1	WESP WASH PUMP No.2
P.O. No.:			
DWG. No.:			
MATERIAL:	DERAKANE 411	DI	DI
SIZE:	9'DIAx10'	3196 2X3-8	3196 2X3-8
CAPACITY:	4700 GAL	198 GPM, 200'	198 GPM, 200'
TEMP/PRESS:			
HP/V/RPM:		25/460/3600	25/460/3600
WEIGHT:			
VENDOR:	AUGUSTA	ITT GOULDS	ITT GOULDS

DESCRIPTION		FIBERGLASS	APISEAL PLAN 11	APISEAL PLAN 11

REVISIONS									
NO.	MOC \ YEAR \ DESCRIPTION	BY	CHKD BY	APPR BY	DATE
0	MACT PROJECT ISSUED FOR CONSTRUCTION	KK	DJH	RJH	10/01
1	MACT PROJECT AS-BUILT	KK	DJH	RJH	06/02
2	AS-BUILT PER MACT PROJECT	CM	DJH	RJH	09/02

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REFERENCE DRAWINGS

LINE DESIGNATION TABLE - 5AA-A-046

OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INCLESIDE, TEXAS

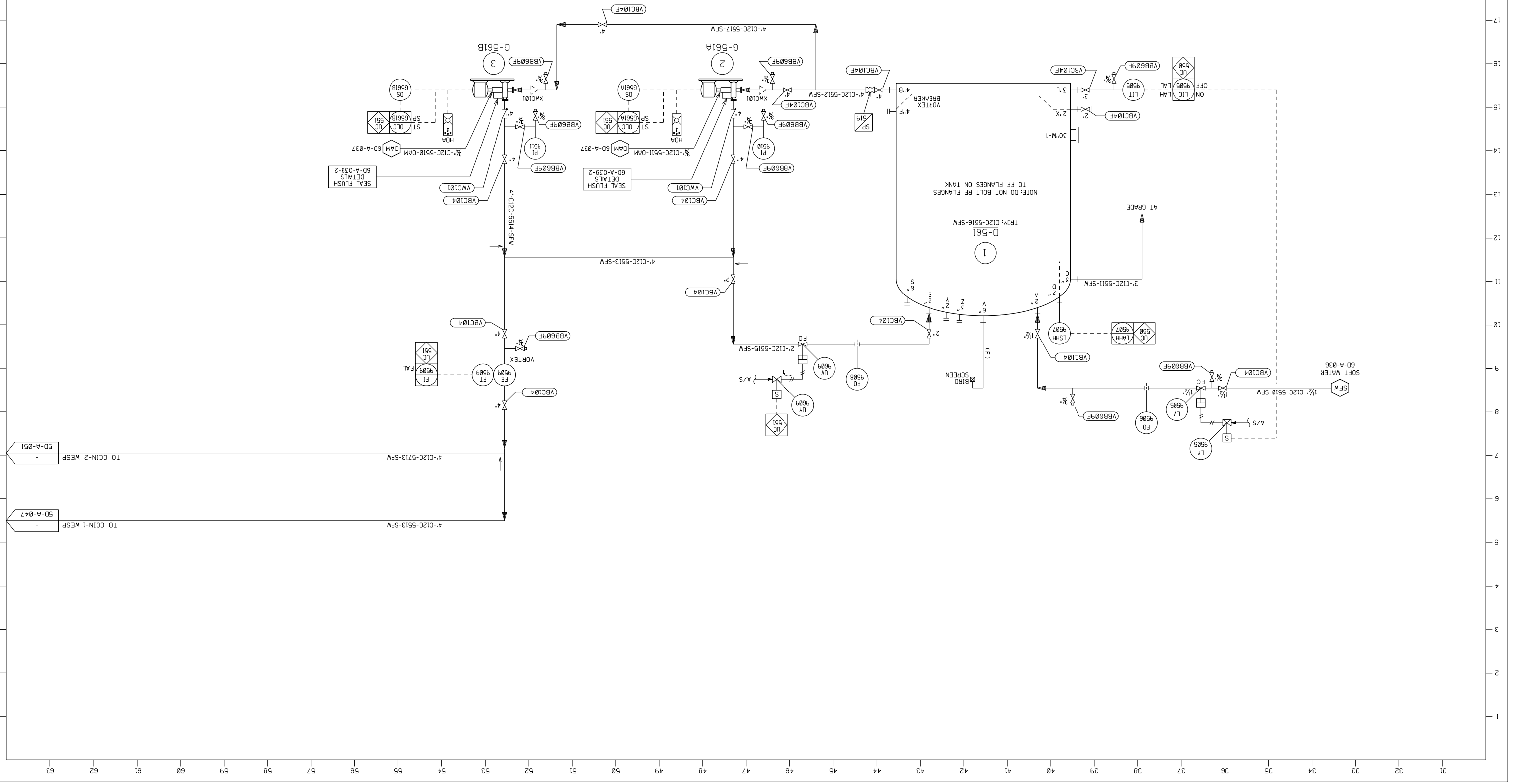
FILENAME 5DA046.DGN

DRAWN BY
CHECKED BY
APPROVED BY

VCM EQUIPMENT LIST

ENGINEERING FLOW DIAGRAM
WESP WASH WATER TANK
CCIN-1 / CCIN-2

EWR NUMBER	AFE NUMBER	AREA DESIGNATION	TYPE	SIZE	DRAWING NUMBER	REVISION
				D	5D-A-046	2



RF:Y2XYCHP1DDN 02/02/2000

EQUIPMENT No.	E-553	(1)	E-554	(2)	V-550	(3)	F-551	(4)
PLANT ID.								
NAME:	SUPERHEATER		CROSS EXCHANGER		CATALYTIC OXYDIZER		CAT OX PREHEATER DWG. 50-A-049	
P.O. No.:								
DWG. No.:								
MATERIAL:	CS/HAST C		CS/CS		CS		DNX - 930	
SIZE:	37'x72"DIA						11.8 M3 TOTAL	
CAPACITY:	698 f12		10660 f12		36000 ACFM		3 BEDS @	
TEMP/PRESS:	(S)400°F/150PSIG FV		(H)700°F/-3PSIG -3PSIG		(H)700°F/-3PSIG -3PSIG		750 MM NET HT EACH	
HP V/R/RM:	(T)300°F/14 PSIG		(C)550°F/-3PSIG -3PSIG					
WEIGHT:								
VENDOR:	KENNEDY		BDT		BDT		BDT / HALDOR TOPSOE	

NOTES:
1. THE SAMPLE PORT DIMENSIONS AS SHOWN ARE REQUIRED TO MEET MINIMUM UPSTREAM/DOWNSTREAM FLOW DISTURBANCE CRITERIA, WHERE ADDITIONAL LENGTH IS AVAILABLE IT IS PREFERABLE TO KEEP THE RATIO OF THE UPSTREAM LENGTH-TO-DOWNSTREAM LENGTH AT, OR NEAR, 4 TO 1. IF NO ADDITIONAL SIGNIFICANT STRUCTURE IS REQUIRED.
2. ⅜" CORROSION ALLOWANCE.
3. ATTACHMENT PIPING FOR VGH IS C12F AND FOR VGW IS P10C.
4. PROVIDE ACCOUSTIC INSULATION FOR ID FAN INLET DUCTING.
5. OUTLET OF CROSS EXCHANGER HAS BLIND FOR ISOLATION.

NO.	DESCRIPTION	BY	DATE
8	REVISION PER MOC NO. 20020802	AR	12/22
7	REVISION PER MOC NO. 20012210	TWL	12/21
6	REVISION PER MOC NO. 20008805	MRG	02/10
5	REVISION PER TEAM NO. 20075842 AND TEAM NO. 20055134	MRG	09/07
4	REVISION PER TEAM NO. 20055134	MRG	08/06
3	REVISED PER AS BUILT	MRG	02/03
2	AS-BUILT PER MACT PROJECT	CM	09/02
1	REVISIONS	BY	DATE

LINE DESIGNATION TABLE - 5AA-A-048

REFERENCE DRAWINGS

OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INCLESIDE, TEXAS

FILENAME 50A048.DGN

DRAWN BY
CHECKED BY
APPROVED BY

ENGINEERING FLOW DIAGRAM
SUPERHEATER & CATALYTIC OXIDIZER
CCIN-1

VCM EQUIPMENT LIST

EWR NUMBER	AFE NUMBER	AREA DESIGNATION	TYPE	SIZE	DRAWING NUMBER	REVISION
				D	5D-A-048	8

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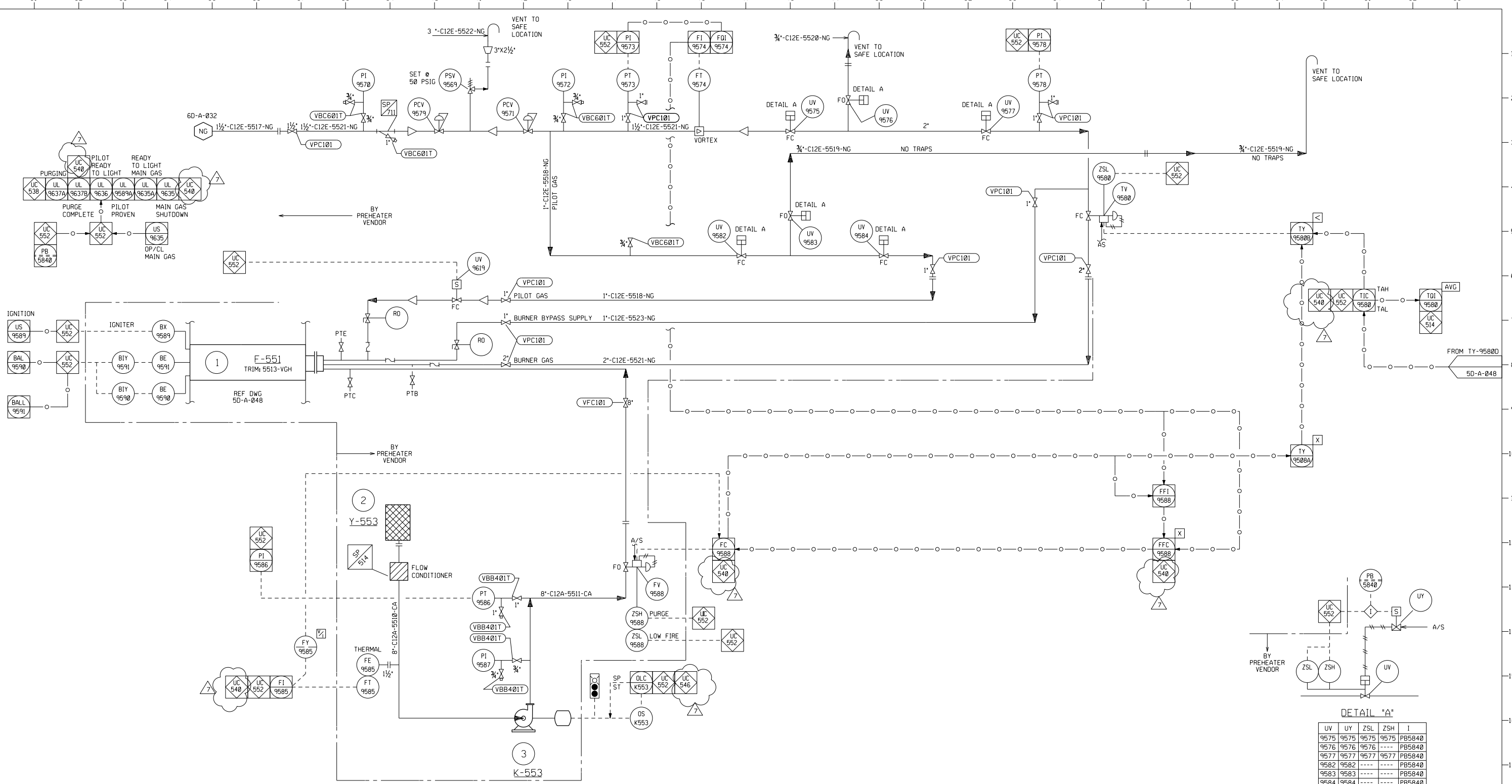

UV	UY	ZSL	ZSH	I
9575	9575	9575	9575	PB5840
9576	9576	9576	----	PB5840
9577	9577	9577	9577	PB5840
9582	9582	----	----	PB5840
9583	9583	----	----	PB5840
9584	9584	----	----	PB5840

EQUIPMENT No.	F-551 (1)	Y-553 (2)	K-553 (3)
PLANT ID.			
NAME:	CAT OX PREHEATER	CAT OX PREHEATER AIR FILTER	CAT OX PREHEATER BLOWER
DESCRIPTION P.O. No.:			
DWG. No.:			
MATERIAL:	CS/INCONEL		CS
SIZE:	WINNOX VER 1.0	MODEL 8 CCF	2308A
CAPACITY:	5 MM BTU/HR		1625 CFM
TEMP/PRESS:	1600F FIRE TUBE		@ 42.5 INCHES WC
HP/V/RPM:			20/460/3600
WEIGHT:			
VENDOR:	BDT/ECLIPSE	BDT/UNIVERSAL	BDT/NYB

NO.	MDC \ YEAR \ DESCRIPTION	REVISION PER MOC NO.20000295	BY	APPR BY	CHKD BY	DATE
7			MRG	RXD	RXD	02/18

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REFERENCE DRAWINGS

LINE DESIGNATION TABLE - 5AA-A-049

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CHECKED BY

APPROVED BY

VCM EQUIPMENT LIST

OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INGLESIDE, TEXAS

FILENAME 5DA049.DGN

ENGINEERING FLOW DIAGRAM
CAT OX PREHEATER
CCIN-1

EWR NUMBER	AFE NUMBER	AREA DESIGNATION	TYPE	SIZE	DRAWING NUMBER	REVISION
				D	5D-A-049	7

PIC-9515
5D-A-047

FROM CROSS EXCHANGER
5D-A-048
42"-CDCT 5512 VGH-3*P
(NOTE 2 & 7)

FI-5522D
5D-A-048

UC 514
AQI 5622D
AVG
NOTE 10

AI 5622D

UC 534
UL 5626B
AUTO CAL IN PROGRESS

UL 5626C
CEMS SYSTEM FAILURE

UC 534
CORR CL2
AI 5625C
RAW CL2
AI 5625R

CORR CO
AI 5626C
RAW CO
AI 5626R

CORR O2
AI 5960C
RAW O2
AI 5960R

UL 5626A
RAW O2 AUTO CAL SELECTED
ON=AUTO
OFF=MANUAL

TI 9596
TT 9596

TI 9598
TT 9598
TE 9598
1½"

IRREGULAR TRANSITION
39¼"-CDCT 5518 VGH-3*P
(NOTE 2 & 7)

¾"-C12C-5514-OAM
OAM
6D-A-037

TT 9597
TI 9597
TE 9597

VBC307S
I"
PIT 9595
UC 543
PI 9595

A/S
FO
PV 9515B
PY 9515B
SPLIT RANGE Ø I/P
PY 9515A
PV 9515A
TE 9596
A/S
FO

UC 543
II 9524
IT 9524

UC 543
SP ST
DLC K554
UC 509
UC 510
OS K554

VE 9599A
VE 9599B
VSH 9599
VAH 9599
BY FAN VENDOR

1
K-554
NOTE 7

AIR HORNS
NOTE 5

IA

AY 5626
AY 5625B
AY 5625A

ROLLING HOURLY AVERAGE
AQ 5624A
STREAM I/VCM
AAH
AI 5624A
AIT 5624
VCM
LOCATED IN AH-501
UL 5624

UC 514
NOTE 4
UL 5626C
CEMS SYS FAIL

CORRECTED CL2
AAH
AI 5625
AIT 5625
CL2

HOURLY AVERAGE
AI 5626A
UC 534
AAH
AQ 5626
UC 514

(CEMS)
AU 5626

UC 534
US 5626
CAL1B BYP.SW
UC 529

AI 5625B
CORR O2
AAL
AI 5960
AQ 5960P
HOURLY AVG.

COMP. CO
AI 5626B
AI 5626
NOTE 3

0-200
AIT 5626A
CO
AIT 5626B
CO
0-3000

AIT 5960
O2

TO ATM
AE 5626
NOTE 1
VBP102

¾" TEFLON TUBING INSULATED
1"
AP 5626
NOTE 1
4"X2"
2 STACK DIAMETERS MIN.
NOTE 9

UC 514
NOTE 4
UL 5626B
AUTO CAL IN PROGRESS
UC 529
NOTES 4

LAST FLOW DISTURBANCE

FROM TI-5621
5D-A-025

US 5626
UL 5626CC
FQ 5623A
UC 543
UC 534

1 STACK DIAMETER MINIMUM
THERMAL MASS
UC 543
UC 552
FE 5623
NEW
FIT 5623
NEW
FI 5623
FAH
FAL
FALL
FI 5623A

3"
NOTE 8
2@4"
SC
VGS105

3"
3"
2@4"
SC
VGS105
(2)
2 STACK DIAMETERS MINIMUM

4-4" SAMPLE CONNECTIONS LOCATED 90° APART. PROVIDE 360° SAMPLING PLATFORM.

NOTE 6
TO FFI-5584
5D-A-024

FDI 5623A
AVG
FAH
FAHH
UC 514
NOTE 4

8 STACK DIAMETERS MINIMUM TO FLOW ELEMENT

2
A-551

SKIRT ACCESS

2"
VBC106

NOTES:

1. AE-5626, AP-5626 ARE EXISTING INSTRUMENTS RELOCATED FROM STACK A-550 TO STACK A-551. SEE DWG. 5D-A-025 DEMO.
2. ATTACHMENT PIPING FOR VGH IS C12F AND FOR VGW IS P10C.
3. SEE COMPLEX LOOP DWG. No. C-511B FOR DCS SOFTWARE IMPLEMENTATION.
4. PREVENTS LIQUID WASTE FEED TO INCIN.
5. AIR HORN TO COOL K-554 BEARINGS.
6. SEE COMPLEX LOOP DWG. NO. C-534B FOR DCS SOFTWARE IMPLEMENTATION.
7. PROVIDE ACCOUSTIC INSULATION TO ID FAN HOUSING & INLET & OUTLET DUCTING.
8. DESIGN OF LADDER TO TOP VENT STACK PLATFORM TO ALLOW SUFFICIENT SPACING FROM HOT VENT STACK.
9. PROVIDE PERSONNEL PROTECTION ON THE STACK AT PLATFORM LOCATIONS.
10. SEE COMPLEX LOOP DWG. NO. C-502B1 FOR DCS SOFTWARE IMPLEMENTATION.

EQUIPMENT No.	K-554 (1)	A-551 (2)
PLANT ID.		
NAME:	CAT OX ID FAN	CAT OX STACK
DESCRIPTION		
P.O. No.:		
DWG. No.:		
MATERIAL:	CS	CS
SIZE:		5.5'x3.5'DIAx125'
CAPACITY:	32000 ACFM	
TEMP/PRESS:	52 INCHES WC	500°F/
HP/V/RPM:	450/4160/1800	
WEIGHT:		
VENDOR:		

NO.	DESCRIPTION	DATE	APPR BY	DWG BY
11	REVISION PER MOC NO.20201013	07/20	AM	TML
10	REVISION PER MOC NO.20080805	02/10	RXD	MRG
9	REVISION PER TEAR NO.20073842	04/08	JLM	MRG
8	REVISION PER TEAR NO.20050134	08/06	RXD	MRG
7	REVISION PER TEAR NO.20050154	06/06	RXD	MRG

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REFERENCE DRAWINGS

OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INGLESIDE, TEXAS

FILENAME 5DA050.DGN

DRAWN BY
CHECKED BY
APPROVED BY

VCM EQUIPMENT LIST

ENGINEERING FLOW DIAGRAM
CAT OX ID FAN & STACK
CCIN-1

EWR NUMBER	AFE NUMBER	AREA DESIGNATION	TYPE	SIZE	DRAWING NUMBER	REVISION
				D	5D-A-050	11

RF=Y2KVCMPID.DGN 02/02/2000

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 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 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

Incinerator CCIN-1

Closure Plan and Cost Estimate

OxyChem
Ingleside, Texas

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Appendix A Supporting Information for Closure Cost Estimates

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 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 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 incinerator is also provided in the unit report (Attachment V.I.1). Under procedures detailed herein, OxyChem will close 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 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 Incinerator CCIN-1, which is subject to permitting standards. The unit is used to treat waste streams, which are classified as RCRA hazardous. Incinerator CCIN-1 is a 34 million Btu/hr unit with a maximum operating temperature of 2400 °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 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" 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 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:

- 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 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 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 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, 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, 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 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 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 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 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 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 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 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 x 1.042 x 1.070 x 1.036 x 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
Incinerator CCIN-1	Volatile organics	SW-846, 8260

Table 2 Closure Schedule

Activity	Schedule (days)
Notify TCEQ of closure	45 (prior to start)
Closure activities begin – after prior 45 day notification	
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 Incinerator CCIN-1

Task	Cost
Flush and dispose of rinsate	$85,466
Incinerate 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 Incinerator CCIN-1

Activity		Cost
Flush Incinerator, Piping, and Pumps with Appropriate Solvent and Dispose of Rinsate		
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
Burn Natural Gas		
4 hours of labor and natural gas @ $100/hr		$400
	Subtotal	$400
Remove and Dispose of Ash, Scrubber Water, Absorber Effluents, and Spent Catalyst		
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
Decontaminate Equipment		
10 hours of labor @ $100/hr		$1,000
	Subtotal	$1,000
Laboratory Analysis		
2 samples @ $500/sample		$1,000
	Subtotal	$1,000
Engineer's Inspection and Certification		
24 hours of labor @ $200/hr		$4,800
	Subtotal	$4,800
	Subtotal	$140,560
	10% Contingency	$14,056
	TOTAL	$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 V.I.2

CCIN-2 Halogen Acid Furnace

Not applicable. Conditions, monitoring, and AWFCO limitations are set in accordance with HWC MACT (40 CFR Part 63, Subpart EEE).

Table V.I.2. – Boiler/Industrial Furnace Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems

Unit Name/Number CCIN-1 and CCIN-2 Use a table for each unit and fill in all columns with the appropriate information

Parameter	Monitoring Basis[1]	Monitoring Device	Device Location	Permit Limit	AWFCO Y/N[2]
Operating Parameters					
Maximum Total Hazardous Waste Feed Rate *[Additional hazardous waste feed limits shall be added as determined necessary based upon feed mechanism and/or waste-specific needs]*				lb/hr	
Maximum Total Pumpable Hazardous Waste Mass Feed Rate *[Not applicable for Tier I or Tier I adjusted metals control limits]*				lb/hr	
Minimum Primary Combustion Chamber Temperature				°F	
Minimum Secondary Combustion Chamber Temperature				°F	
Maximum Secondary and/or Primary Combustion Chamber Temperature *[Include if using Tier II, III metals controls only]*				°F	
Maximum Flue Gas Temperature at PM Control Device Inlet *[Tier II and Tier III Metals only as applicable]*				°F	

Parameter	Monitoring Basis[1]	Monitoring Device	Device Location	Permit Limit	AWFCO Y/N[2]
Operating Parameters (continued)					
Maximum Combustion Gas Velocity Indicator *[If condition is something other than "maximum combustion gas velocity", write specific name of condition]*					
Atomization parameters *[as necessary]*					
Feed Rates: (Metals, Total Chlorine, and Ash)					
Secondary Combustion Zone Pressure *[or other method for fugitives monitoring]*					
Primary Combustion Zone Pressure *[or other method for fugitives monitoring]*					
CEMS Monitoring Parameters					
Stack Oxygen	Continuous	CEMS	Stack	No Limit (for correction to 7% O_2)	No
Stack CO	Continuous HRA	CEMS	Stack	100 ppmv HRA, 7% O_2, dry basis	Yes
Stack THC *[If specified in the permit]*	Continuous HRA	CEMS	Stack	20 ppmv HRA, 7% O_2, dry basis	Yes
APCD Parameters					
Pressure drop across Baghouse *[or fabric filter]*				in W.C.	

Parameter	Monitoring Basis[1]	Monitoring Device	Device Location	Permit Limit	AWFCO Y/N[2]
[Wet Scrubbers:]					
Ionizing Wet Scrubber minimum Voltage				kilovolts (kV)	
Minimum liquid to flue gas ratio (L/G)				gallons/1000 actual cubic feet (acf)	
[Wet Scrubbers:] (continued)					
Minimum scrubber blowdown				gallons/min	
Minimum scrubber water pH					
[Venturi Scrubbers:]					
Venturi scrubber minimum liquid to gas ratio (L/G)				gallons/1000 actual cubic feet (acf)	
Venturi differential gas pressure across venturi scrubber				in W.C.	
[Dry Scrubbers:]					
Minimum alkaline reagent *[insert name of reagent here, such as lime]* flow to the dry scrubber				pounds per minute	
Maximum flue gas flow rate				acfm	

Parameter	Monitoring Basis[1]	Monitoring Device	Device Location	Permit Limit	AWFCO Y/N[2]
[Absorbers:]					
Absorber minimum pH of incoming liquid					
Absorber minimum liquid to gas ratio (L/G)				gallons/1000 actual cubic feet (acf)	
Other Air Pollution Control Devices					
Permit conditions as necessary					

1. I*nstantaneous* as defined in 40 CFR 266.102(e)(6)(i)(A) shall mean a value which occurs at any time. A value shall be determined by the monitoring device no less than every 15 seconds.
   Continuous monitor is one which continuously samples or measures the regulated parameter without interruption and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.
   Hourly Rolling Average as defined in 40 CFR 266.102(e)(6)(ii).
   For carcinogenic metals and lead feed rates: *Instantaneous* as defined above or, *Rolling average* as defined in 40 CFR 266.102(e)(6)(ii)
2. *AWFCO: Automatic Waste Feed Cutoff.* For AWFCOs indicated by "Y", the Permit Limit in the table triggers an AWFCO.
3. The respective specific gravity and constituent concentration of each stream associated with a volumetric rate must be known to determine the mass feed rate.

Not applicable. Maximum constituent feed rates are set in accordance with the HWC MACT (40 CFR Part 63, Subpart EEE).

Table V.I.3 – Maximum Constituent Feed Rate

The total feed rate of constituent to the boiler/industrial furnace(s) shall not exceed the following limitations in grams per hour (g/hr) or tons per year (T/yr), as noted. The metals limitations have been evaluated through risk assessment. The ash and chlorine limits are based upon testing or regulatory limits.

Constituent	Maximum Allowable Feed Rate In All Feedstreams Hourly Basis (g/hr)	Maximum Allowable Feed Rate In All Hazardous Waste Feedstreams Hourly Basis (g/hr)[1]	Maximum Allowable Feed Rate in All Pumpable Hazardous Waste Feedstreams Hourly Basis (g/hr)[1]	Maximum Allowable Feed Rate in All Feedstreams Annual Basis (T/yr)
Arsenic				
Beryllium				
Cadmium				
Total Chromium				
Antimony				
Barium				
Lead				
Mercury				
Silver				
Thallium				
Total Chlorine				
Ash				
(Additional Constituent)				

1. Not applicable for Tier I or Tier I adjusted metals feed rate screening limits.

[Hourly feed rate limits must comply with the requirements of 40 CFR 266.106 for carcinogenic metals and non-carcinogenic metals. As applicable, the feed rate limit for chromium may be specified as hexavalent and total chromium limits.]

Table V.I.4 – Maximum Allowable Emission Rates

Not Applicable. Maximum emission rates are set in accordance with the HWC MACT (40 CFR Part 63, Subpart EEE).

[Applicant to use a table for each operating mode as applicable and for each unit]

Carcinogenic Constituent	Compliance Tier	Maximum Allowable Emission Rate[1]	Units[2]
Arsenic			g/hr
Beryllium			g/hr
Cadmium			g/hr
Chromium, Total			g/hr
Non-Carcinogenic Constituent	Compliance Tier	Maximum Allowable Emission Rate[1]	Units[2]
Antimony			g/hr
Barium			g/hr
Lead			g/hr
Mercury			g/hr
Silver			g/hr
Thallium			g/hr
Hydrogen Chloride			g/hr
Free Chlorine			g/hr
Particulate Matter			Grains/dscf

1. Not applicable for Tier I of Tier I adjusted feed rate screening limits.
2. *g/hr* denotes grams per hour. *Grains/dscf* denotes grains per dry standard cubic foot (standard conditions: 760 mm Hg, 68 F) after correction to a stack gas concentration of 7% oxygen.

Note: Site-specific dispersion modeling factor = x.xxx [insert dispersion factor for Tier III as applicable] micrograms per cubic meter per grams per second emission rate.

Table V.I.8 – Principal Organic Hazardous Constituents

Not applicable. Pursuant to the HWC MACT (40 CFR Part 63, Subpart EEE), Comprehensive Performance Tests (CPTs) are performed instead of RCRA Trial Burns.

List the wastes for which the trial burn demonstration will be made and the principal organic hazardous constituents in each waste.

Waste	Principal Organic Hazardous Constituents

Attachment V.I.2

Boiler and Industrial Furnace Report

Incinerator CCIN-2

OxyChem
Ingleside, Texas

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1.0 Overview

OxyChem operates two hydrochloric acid (HCl) production furnaces (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 HCl 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 HCl 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 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^-) 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 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 Figure 1.

Incinerator CCIN-2 consists of three primary process areas:

1. Incinerator,
2. HCl Absorber, and
3. Air Pollution Control System (APCS).

The 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 incineration system, in its prior configuration, is illustrated 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 incineration system.

1.2.1 Waste Storage

All of the liquid hazardous wastes and vent streams treated in the incinerator are generated on-site or off-site at other OxyChem facilities. Prior to being pumped to the 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 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 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 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 incinerator.

1.2.2 Incineration System

The CCIN-1 and CCIN-2 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. Appendix A provides the plot plan for CCIN-2.

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 incinerator utilized a single induced draft (ID) fan to provide motive force to transport the combustion gas through the 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 incinerator, which generates process steam for on-site use.

1.2.3 HCl Absorber

The 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 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 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 incinerator.

The wastes that are burned in the 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 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 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 incineration system's engineering drawings (Appendix A) and specifications were prepared by OxyChem engineering.

3.1 Description of Incinerator

The incinerator system consists of the firebox (combustion zone) and the waste heat boiler. The incinerator and waste heat boiler are oriented to each other as shown 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 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 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 incinerator system. Natural gas is the only support fuel used for the 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 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 other wastes prior to incineration.

The heavy ends normally are 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 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 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 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 incinerator. The split between the two 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 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 incineration conditions are outside the RCRA permit limits. The AWFCO system resides in the distributed control system (DCS). During startup and shutdown of the incinerator or during process upsets, the interlock system automatically stops hazardous liquid waste feed systems and prevents their restart until the 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 shalt 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 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 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[a]	25 psig
Low natural gas pressure[a]	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 incinerator continues to run on natural gas to incinerate vent gases. These limits and conditions reflect AWFCO requirements for the OxyChem hazardous waste 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 kacfm (Hourly Rolling Average)
Maximum Combustion Chamber Pressure	> 0 in. wc (Instantaneous)
Maximum Stack Gas CO Concentration	≥ 100 ppm dry @ 7% O_2 (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_2 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_2 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 NOx 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_2 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 exchanges, 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 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 incineration system that 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 incineration system operation. 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 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 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 Incinerator CCIN-2, is provided 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 Bum 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

Component	VCM HE	VCM LE	EDC HE	Hazardous Waste Oil	Mother Liquor
Organic Hazardous Air Pollutants (HAPs) Concentration Ranges (wt. %)					
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
Other Organic Constituents Concentration Ranges (wt. %)					
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[a]	30-60	-	25-50	-	30-60
Oil	-	-	-	>95	-
Maximum Inorganic HAP Concentrations (mg/kg)[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)

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

[a] – Primarily chlorinated butanes and butenes

[b] – Except chlorine, which is presented as a range of weight percents

[c] – Intermittently generated

Table 3-1 Incinerator Equipment [1]

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

[1]Based on design conditions

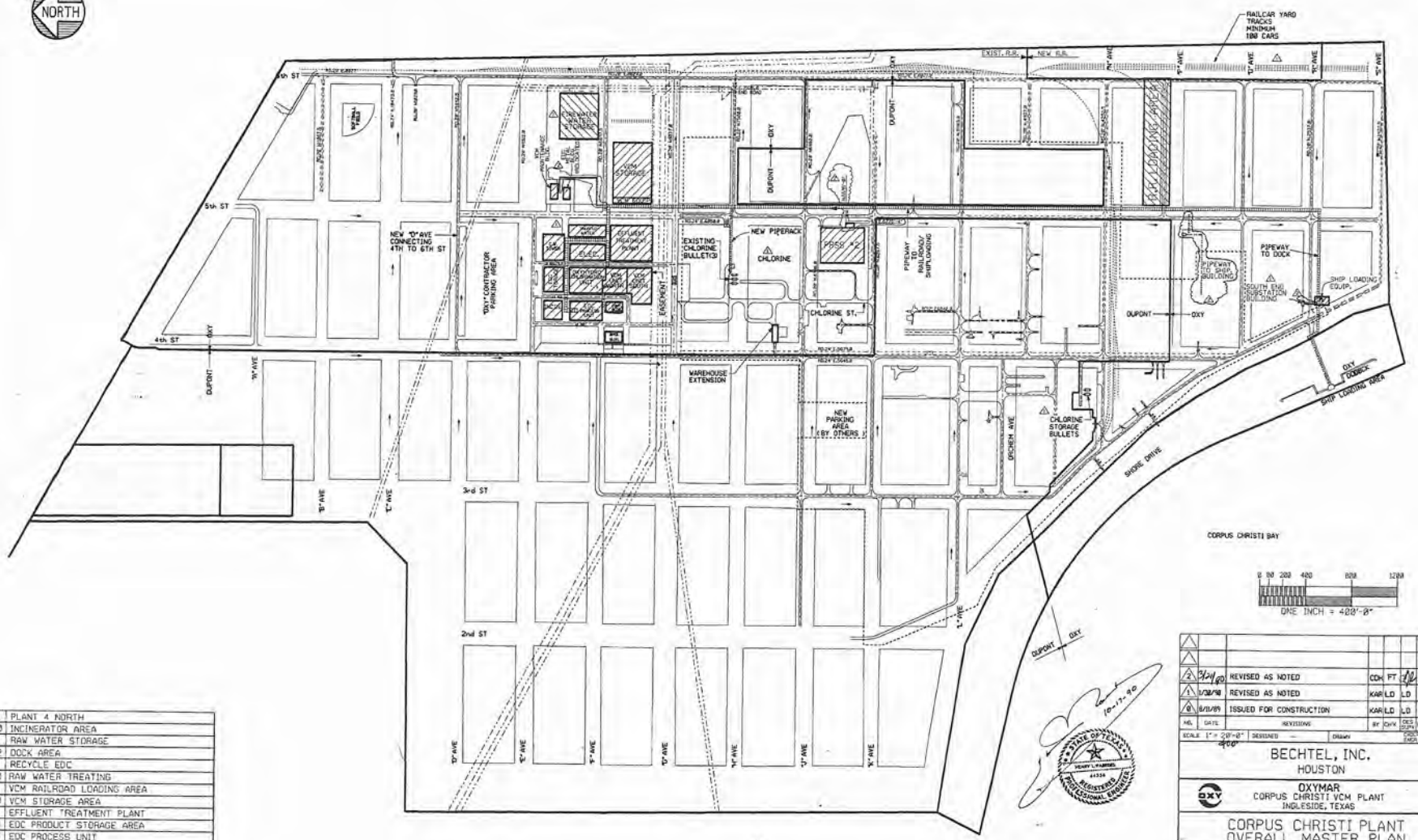
[2]The first number designates the unit within the CCIN-1 incinerator system and the second number designates the unit within the CCIN-2 incinerator system

[3]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 0-200 ppmv 0-3,000 ppmv

Figures



4D-00-A-401	PLANT 4 NORTH
5D-00-A-500	INCINERATOR AREA
6D-00-A-601	RAW WATER STORAGE
8D-00-A-802	DOCK AREA
7D-00-A-701	RECYCLE EDC
7D-00-A-600	RAW WATER TREATING
8D-00-A-801	VCM RAILROAD LOADING AREA
8D-00-A-800	VCM STORAGE AREA
5D-00-A-501	EFFLUENT TREATMENT PLANT
7D-00-A-700	EDC PRODUCT STORAGE AREA
2D-00-A-200	EDC PROCESS UNIT
4D-00-A-400	PLANT 4 SOUTH
3D-00-A-300	PLANT 3 OVERALL
9D-00-A-901	PROCESS AREA PLOT PLAN

REFERENCE DRAWINGS

NO.	DATE	REVISIONS	BY	CHK	DES SUPV	ENGR	PROJ ENGR	APPR
2	5/24/90	REVISED AS NOTED	CDH	FT	[illegible]	---	[illegible]	[illegible]
1	3/28/90	REVISED AS NOTED	KAR	LD	LD	---	LDB	ARP
0	8/11/89	ISSUED FOR CONSTRUCTION	KAR	LD	LD	---	LDB	ARP

SCALE 1" = 200'-0" (1:400) DESIGNED — DRAWN

BECHTEL, INC.
HOUSTON

OXYMAR
CORPUS CHRISTI VCM PLANT
INGLESIDE, TEXAS

CORPUS CHRISTI PLANT OVERALL MASTER PLAN

AREA DESIGNATION | TYPE | EWR NUMBER | AFE NUMBER

JOB NO. 19611 | DRAWING NO. 9D-00-A-900 | REV. 2

CADD FILE NAME: 9D00A900.DGN FMG 03/17/90 RF=D400.DGN

MATERIAL	MOL. WT.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
CH_4/NO	16.40/30								-/27	-/27	-/27					-/27				-/27					
C_2H_4	28.04																								
C_2H_6	30.06																								
C_3H_8	44.11																								
C_4H_{10}	58.14																								
VENT GAS $C_{2.05}H_{6.46}Cl_{0.76}$	60.03	786																							
CO	28	81																							
H_2	2.02	5																							
HCL	36.46	31							3146	3146	60	3086		15345	3069	1									
H_2O	18.02	1	34220					790	1293	3409	3409	9855	27774	0	138105	27621	2863	483401.5	49054	4816971.2	1818	8889	92.5	659	7.7	38.5
CL_2	70.9								77	77	77	6													
CO_2	44	357							6621	6621	6621	6621								6621					
N_2	28	6783						38582	45358	45358	45358	45358				45358				45358					
AR	39.95																								
O_2	32	18						11714		6120	6120	6120				6120				6120					
NAOH	39.99																165		9.5		TRACE		165		9.5
Na_2SO_4	142.04																4203	12307	4173		77				
$Na_2S_2O_3$	158.09																39.5		3.3			39.5		3.3	
NACL	58.43																12167	4250	12085		223				
LIQUID WASTE $C_{2.68}H_{2.97}O_{0.13}Cl_{0.76}$	99.88							4311																	
TEMPERATURE °F		105	90				90	95	388	2000	500	149	110	90	148	113	102	113	100	113	103	70	158	70	158
PRESSURE - PSIA		15.205						40	14.7	215	(-4)	(-10)	(-15)			(-16)					(-17)				
DENSITY - LBS/CU.FT.			62.116					77.4									64.68	62.08	62.08	63.96	63.96	62.08	62.08	62.08	75.7	75	75.7
VISCOSITY - C.P.			.753					0.8					0.6												
AVER.MOL.WT.		29.59						99.88	28.58	18.02	28.93	28.93	27.12			28.76					29.06				
FLOW - GPM OR (ACFM)		(1761)	68.7				7	(12,045)	(16.9)	(67,456)	(26,979)	(19,311)	59.5	0	300	60	1004	1018	1000	(14,576)	19	0.22	0.02	1.35	0.02	0.08
SCFM (60°F & 1 ATMOS)		1720	-				-	11,289	151	14,147	14,153	15,885	-	-	-	13,313	-	-	-	13,027	-	-	-	-	-	-
TOTAL LBS/HR		8662	3220				4311	51,087	12.93	64,758	64,750	68,988	30,860	0	153,450	30,690	499,976	507,098	497,968	59,944	9,189	132	824	11	48
PHASE		V	L			L	V	L/V	V	V	V	V	L	L	L	V	L	L	L	V	L	L	L	L	L

HEAT EXCHANGER	E-550/E-570	E-551/E-571	E-552A/B/E-572A/B (ONE SPARE)	E-552A/B/E-572A/B							
THEO.DUTY - BTU/HR.	$26.89X10^6$	945,450									
DESIGN DUTY	$29.27X10^6$	$1.04X10^6$	$6.57X10^6$								
M.T.D. = °F.											
AREA - FT.^{2}											
U_c BTU/HR. - FT.^{2}°F.											
U_D BTU/HR. - FT.^{2}°F.											
FOULING FACTOR											

VCMPFD.DGN 03/19/93

MATERIAL BALANCE FIGURES IN _____ PER _____ WITH DESIGN CAPACITY OF _____ / _____ AT _____ HOURS/ _____

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LEGEND

- STREAM NUMBER
- GPM
- POUNDS/HR.
- SCFM
- TEMPERATURE °F
- PSIG

NO.	REMARKS	DRAWN	CHKD.	APP.	DATE
7	AS-BUILT PER MACT PROJECT	CM	DER		09/22/92
1	REMOVED HOLD #1 & 2. GENERAL UPDATE.	OCR PG	JCR		4/24/89
2	FOR 1.1 BILLION LB/YR DESIGN BASIS	HN PG	AA	ARP OCR	9/5/89
3	REVISED AS CLOUDED	PG		AA ARP	
4	STORM WATER TANK PROJECT TEAR#91501S	MAG	TJW	TJW	8/29/94
5	CW BLOWDOWN RECYCLING TEAR #94588S	MAG	JEB	TJW	8/21/95
6	REVISED FOR MACT PROJECT-IPC	CM	MAG	RJH	10/26/01

DRAFTSMAN	DATE
PROCESS ENGR.	
PROCESS ENGR.	
PROJECT APP.	

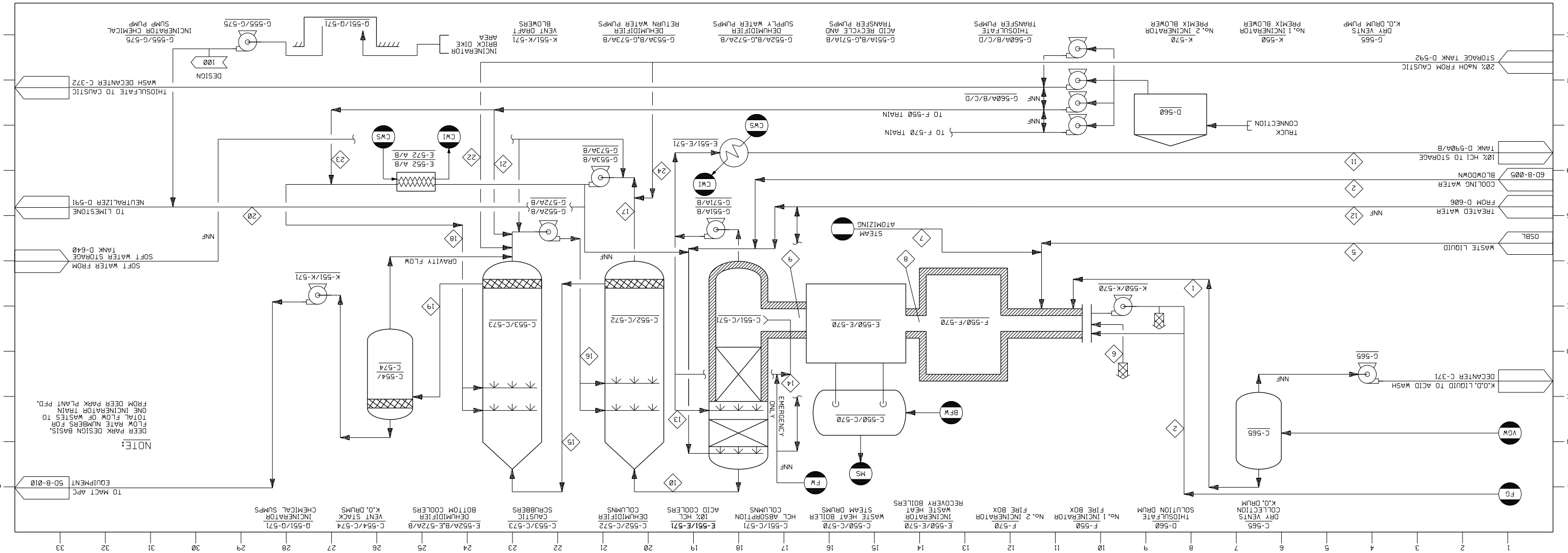
OXYMAR
INGLESIDE VCM PLANT
INGLESIDE, TEXAS

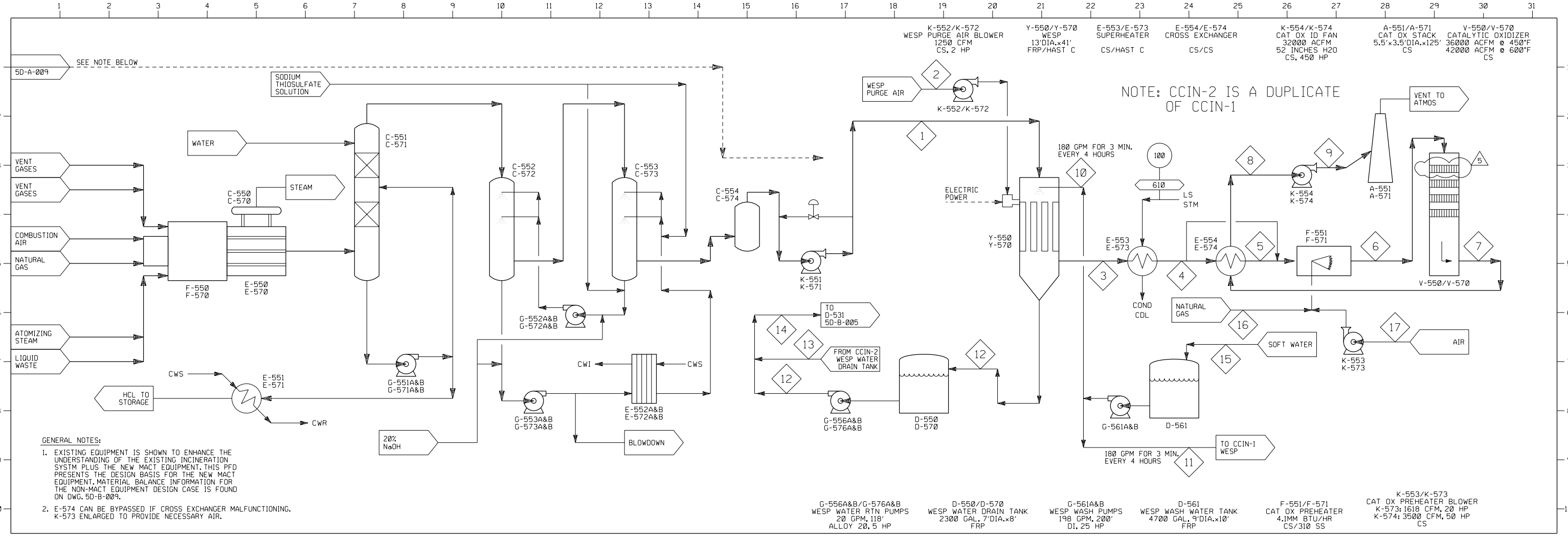
SCALE	NONE	JOB NO.	19611	DWG	50-B-009

VCM PLANT PROCESS FLOW DIAGRAM
INCINERATOR/SCRUBBER SYSTEM (DESIGN CASE)

REV. 7

DSI:I32,4\50D009.DGN
DATE 12-04-00





GENERAL NOTES:

1. EXISTING EQUIPMENT IS SHOWN TO ENHANCE THE UNDERSTANDING OF THE EXISTING INCINERATION SYSTM PLUS THE NEW MACT EQUIPMENT. THIS PFD PRESENTS THE DESIGN BASIS FOR THE NEW MACT EQUIPMENT. MATERIAL BALANCE INFORMATION FOR THE NON-MACT EQUIPMENT DESIGN CASE IS FOUND ON DWG. 5D-B-00%.
2. E-574 CAN BE BYPASSED IF CROSS EXCHANGER MALFUNCTIONING. K-573 ENLARGED TO PROVIDE NECESSARY AIR.

G-556A&B/G-576A&B
WESP WATER RTN PUMPS
20 GPM, 118'
ALLOY 20.5 HP

D-550/D-570
WESP WATER DRAIN TANK
2300 GAL, 7'DIA.x8'
FRP

G-561A&B
WESP WASH PUMPS
198 GPM, 200'
DI. 25 HP

D-561
WESP WASH WATER TANK
4700 GAL, 9'DIA.x10'
FRP

F-551/F-571
CAT OX PREHEATER
4.1MM BTU/HR
CS/310 SS

K-553/K-573
CAT OX PREHEATER BLOWER
K-573: 1618 CFM, 20 HP
K-574: 3500 CFM, 50 HP
CS

MATERIAL	MOL. WT.	FREEZING POINT °F	BOILING POINT °F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	-	◇	◇	◇	◇	◇	◇	◇
GASES:																					-							
CO2	44			7470		7470	7470	7470	7772	7772	7772	7772							3									
O2	32			9154	1308	10462	10462	10462	10503	10503	10503	10503								466									
N2	28			52428	4306	56734	56734	56734	58269	58269	58269	58269							2	1533									
H2O	18			7853		7853	7853	7853	8086	8086	8086	8086																	
CH4	16																		90									
C2H6	30																		9									
C3H8	44																		8									
LIQUIDS:																												
H2O	18	32	212										1125	1125	1125	1125	2250	2250										
TOTAL				76905	5614	82519	82519	82519	84630	84630	84630	84630	1125	1125	1125	1125	2250	2250	112	1999								
TEMPERATURE °F				132	80	129	155	356	450	450	256	297	90	90	130	130	130	90	80	80								
PRESSURE - PSIA ('H2O G)				14.66 (-1)	14.7 (0)	14.45 (-7)	14.23 (-13)	14.09 (-17)	14.01 (-19)	13.29 (-39)	13.04 (-46)	14.77 (+2)							14.7	14.7								
DENSITY - LBS./CU.FT.				0.0642	0.0732	0.0638	0.0601	0.0449	0.0400	0.0380	0.0473	0.0507	62.4	62.4	62.4	62.4	62.4	62.4	0.0455									
VISCOSITY - C.P.																												
AVER.MOL.WT.				27.83	28.84	27.89	27.89	27.89	27.88	27.88	27.88	27.88							17.93	28.84								
FLOW - GPM													2.25	2.25	2.25	2.25	4.50	4.50										
SCFM (68°F & 1 ATMOS)				17751	1250	19002	19002	19002	19489	19489	19489	19489							40	445								
ACFM				19965	1279	21571	22871	30648	35255	37165	29803	27819							41	455								
TOTAL LB.MOLE/HR				2764.54	194.66	2959.20	2959.20	2959.20	3035.11	3035.11	3035.11	3035.11							6.25	69.31								

INCLUDES 3" WC DUCT LOSS

HEAT EXCHANGER	E-553/E-573 SUPERHEATER	E-554/E-574 CROSS EXCHANGER	F-551/F-571 CAT OX PREHEATER			
THEO.DUTY - BTU/HR.	565,000		2,400,000			
DESIGN DUTY	1,440,000	4,429,000	4,100,000			
M.T.D. = °F.	128	100				
AREA - FT.^{2}	698	10660				
U_c BTU/HR. - FT.^{2}-°F.	16.9	4.97				
U_D BTU/HR. - FT.^{2}-°F.	U_D=16.5 / U_S=16.1	U_D=4.95 / U_S=4.2				
FOULING FACTOR	0.0015	0.001				

LEGEND
◇ STREAM NUMBER
GPM
POUNDS/HR.
SCFM @ 68°F
TEMPERATURE °F
PSIG
STD VOL = 385.27 ft^3/lbM

FMT FILE NAME: 00014.FMT (22 34 PROCESS FLO SHT)
FMT CELL NAME: 00014

MATERIAL BALANCE FIGURES IN POUNDS PER HOUR WITH DESIGN CAPACITY OF - / DAY AT 24 HOURS/ DAY

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NO.	REVISIONS	DRAWN	CHKD.	APP.	DATE
4	REVISED PER TEAR NO. 20065208	MRG	JLM	JLM	08/09/07
3	REVISED PER TEAR NO. 20075059	MRG	JLM	JLM	04/16/07
2	REVISED PER TEAR NO. 20038076	MRG	SMS	SMS	06/03/03
1	AS-BUILT PER MACT PROJECT	CM	DER	RJH	09-23-02
0	ISSUE FOR CONSTRUCTION	KPK	DJH	RJH	01-22-02
0B	ISSUE FOR TNRCC	KPK	DJH	RJH	05-10-01
5	REVISED PER TEAR NO. 20055094	MRG	JLM	JLM	12/11/07

DRAFTSMAN CM DATE
PROCESS ENGR. DJH
PROCESS ENGR.
PROJECT APP.
FILE NAME: 5DB010.DGN

OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INGLESIDE, TEXAS

DWG. 5D-B-010 REV: 5

PROCESS FLOW SHEET
INGLESIDE MACT

MACT PROJECT
CCIN-1 / CCIN-2

Appendix A

Engineering Drawings

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-0029, 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-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

MATERIAL	MOL. WT.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
CH_4/NO	16.40/30								-/27	-/27	-/27					-/27				-/27					
C_2H_4	28.04																								
C_2H_6	30.06																								
C_3H_8	44.11																								
C_4H_{10}	58.14																								
VENT GAS $C_{2.05}H_{6.46}Cl_{0.76}$	60.03	786																							
CO	28	81																							
H_2	2.02	5																							
HCL	36.46	31							3146	3146	60	3086		15345	3069	1									
H_2O	18.02	1	34220					790	1293	3409	3409	9855	27774	0	138105	27621	2863	483401.5	49054	4816971.2	1818	8889	92.5	659	7.7	38.5
CL_2	70.9								77	77	77	6													
CO_2	44	357							6621	6621	6621	6621								6621					
N_2	28	6783						38582	45358	45358	45358	45358				45358				45358					
AR	39.95																								
O_2	32	18						11714		6120	6120	6120				6120				6120					
NAOH	39.99																165		9.5		TRACE		165		9.5
Na_2SO_4	142.04																4203	12307	4173		77				
$Na_2S_2O_3$	158.09																39.5		3.3			39.5		3.3	
NACL	58.43																12167	4250	12085		223				
LIQUID WASTE $C_{2.68}H_{2.97}O_{0.13}Cl_{0.76}$	99.88							4311																	
TEMPERATURE °F		105	90				90	95	388	2000	500	149	110	90	148	113	102	113	100	113	103	70	158	70	158
PRESSURE - PSIA		15.205						40	14.7	215	(-4)	(-10)	(-15)			(-16)					(-17)				
DENSITY - LBS/CU.FT.			62.116					77.4									64.68	62.08	62.08	63.96	63.96	62.08	62.08	62.08	75.7	75	75.7
VISCOSITY - C.P.			.753					0.8					0.6												
AVER.MOL.WT.		29.59						99.88	28.58	18.02	28.93	28.93	27.12			28.76					29.06				
FLOW - GPM OR (ACFM)		(1761)	68.7				7	(12,045)	(16.9)	(67,456)	(26,979)	(19,311)	59.5	0	300	60	1004	1018	1000	(14,576)	19	0.22	0.02	1.35	0.02	0.08
SCFM (60°F & 1 ATMOS)		1720	-				-	11,289	151	14,147	14,153	15,885	-	-	-	13,313	-	-	-	13,027	-	-	-	-	-	-
TOTAL LBS/HR		8662	3220				4311	51,087	12.93	64,758	64,750	68,988	30,860	0	153,450	30,690	499,976	507,098	497,968	59,944	9,189	132	824	11	48
PHASE		V	L			L	V	L/V	V	V	V	V	L	L	L	V	L	L	L	V	L	L	L	L	L

HEAT EXCHANGER	E-550/E-570	E-551/E-571	E-552A/B/E-572A/B (ONE SPARE)	E-552A/B/E-572A/B							
THEO.DUTY - BTU/HR.	$26.89X10^6$	945,450									
DESIGN DUTY	$29.27X10^6$	$1.04X10^6$	$6.57X10^6$								
M.T.D. = °F.											
AREA - FT.^{2}											
U_c BTU/HR. - FT.^{2}°F.											
U_D BTU/HR. - FT.^{2}°F.											
FOULING FACTOR											

VCMPFD.DGN 03/19/93

MATERIAL BALANCE FIGURES IN _____ PER _____ WITH DESIGN CAPACITY OF _____ / _____ AT _____ HOURS/ _____

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LEGEND

- STREAM NUMBER
- GPM
- POUNDS/HR.
- SCFM
- TEMPERATURE °F
- PSIG

NO.	REMARKS	DRAWN	CHKD.	APP.	DATE
7	AS-BUILT PER MACT PROJECT	CM	DER		09/22/92
1	REMOVED HOLD #1 & 2. GENERAL UPDATE.	OCR PG	JCR		4/24/89
2	FOR 1.1 BILLION LB/YR DESIGN BASIS	HN PG	AA	ARP OCR	9/5/89
3	REVISED AS CLOUDED	PG		AA ARP	
4	STORM WATER TANK PROJECT TEAR#91501S	MAG	TJW	TJW	8/29/94
5	CW BLOWDOWN RECYCLING TEAR #94588S	MAG	JEB	TJW	8/21/95
6	REVISED FOR MACT PROJECT-IPC	CM	MAG	RJH	10/26/01

DRAFTSMAN	DATE
PROCESS ENGR.	
PROCESS ENGR.	
PROJECT APP.	

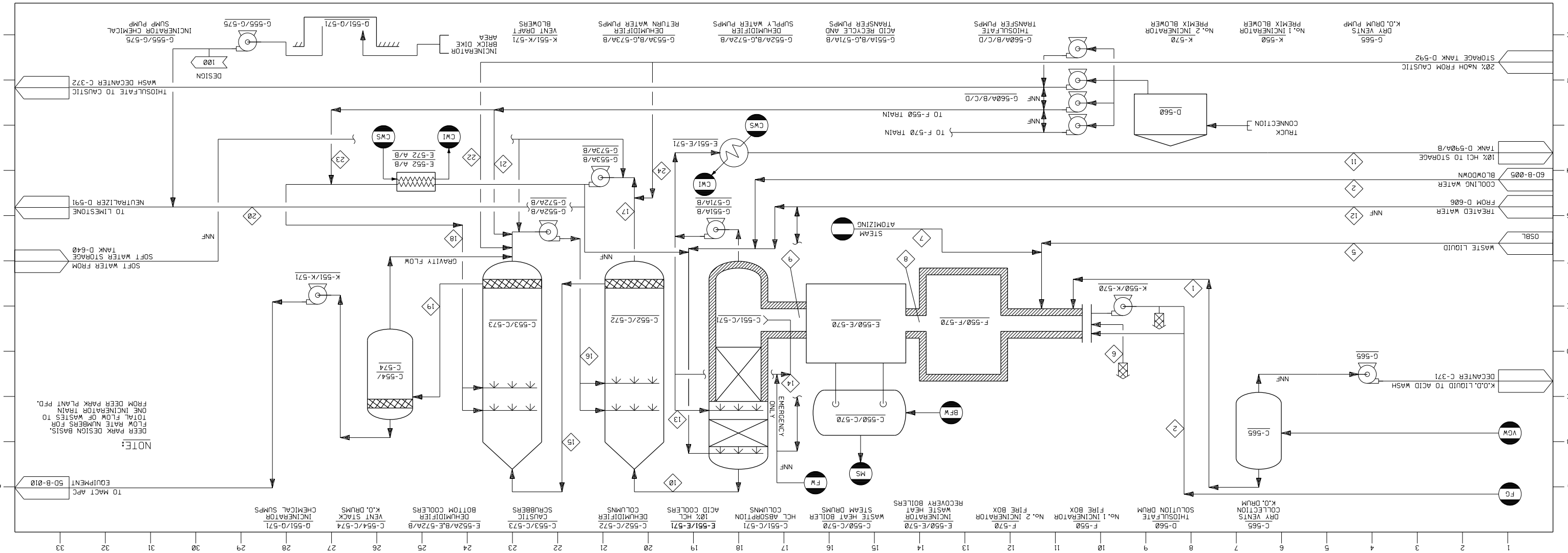
OXYMAR
INGLESIDE VCM PLANT
INGLESIDE, TEXAS

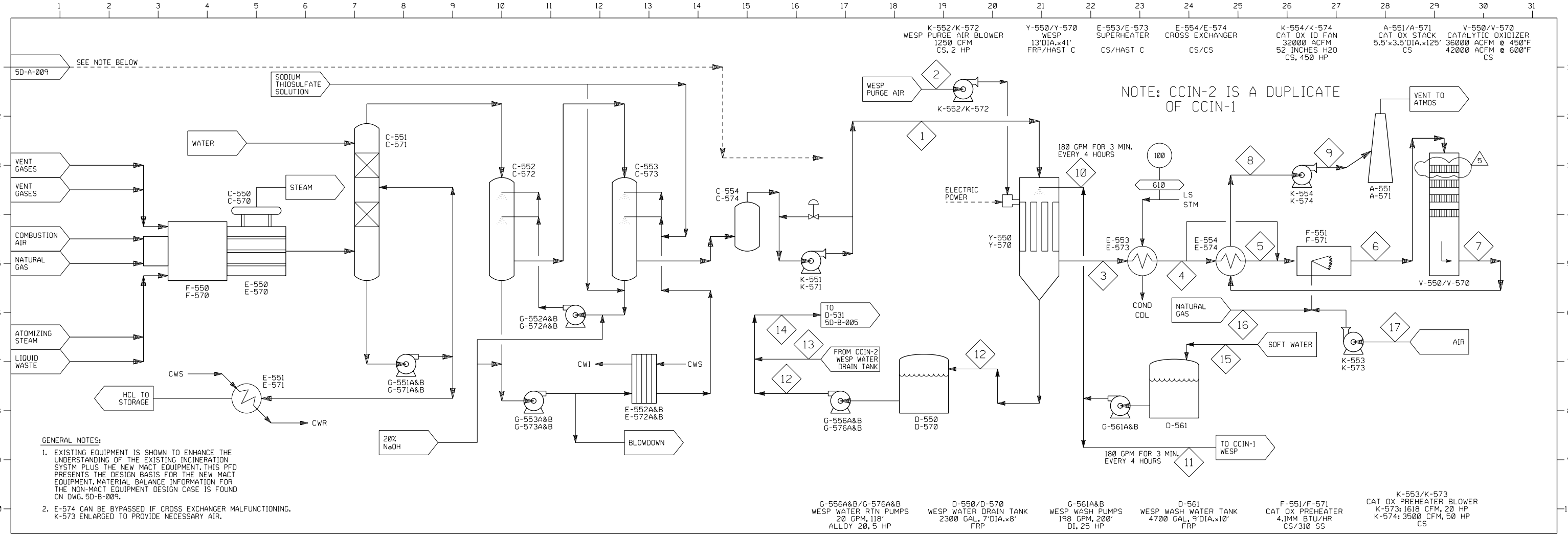
SCALE	NONE	JOB NO.	19611	DWG	50-B-009

VCM PLANT PROCESS FLOW DIAGRAM
INCINERATOR/SCRUBBER SYSTEM (DESIGN CASE)

REV. 7

DSI:I32,4\50D009.DGN
DATE 12-04-00





GENERAL NOTES:

1. EXISTING EQUIPMENT IS SHOWN TO ENHANCE THE UNDERSTANDING OF THE EXISTING INCINERATION SYSTM PLUS THE NEW MACT EQUIPMENT. THIS PFD PRESENTS THE DESIGN BASIS FOR THE NEW MACT EQUIPMENT. MATERIAL BALANCE INFORMATION FOR THE NON-MACT EQUIPMENT DESIGN CASE IS FOUND ON DWG. 5D-B-00%.
2. E-574 CAN BE BYPASSED IF CROSS EXCHANGER MALFUNCTIONING. K-573 ENLARGED TO PROVIDE NECESSARY AIR.

G-556A&B/G-576A&B
WESP WATER RTN PUMPS
20 GPM, 118'
ALLOY 20.5 HP

D-550/D-570
WESP WATER DRAIN TANK
2300 GAL, 7'DIA.x8'
FRP

G-561A&B
WESP WASH PUMPS
198 GPM, 200'
DI. 25 HP

D-561
WESP WASH WATER TANK
4700 GAL, 9'DIA.x10'
FRP

F-551/F-571
CAT OX PREHEATER
4.1MM BTU/HR
CS/310 SS

K-553/K-573
CAT OX PREHEATER BLOWER
K-573: 1618 CFM, 20 HP
K-574: 3500 CFM, 50 HP
CS

MATERIAL	MOL. WT.	FREEZING POINT °F	BOILING POINT °F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	-	◇	◇	◇	◇	◇	◇	◇
GASES:																					-							
CO2	44			7470		7470	7470	7470	7772	7772	7772	7772							3									
O2	32			9154	1308	10462	10462	10462	10503	10503	10503	10503								466									
N2	28			52428	4306	56734	56734	56734	58269	58269	58269	58269							2	1533									
H2O	18			7853		7853	7853	7853	8086	8086	8086	8086																	
CH4	16																		90									
C2H6	30																		9									
C3H8	44																		8									
LIQUIDS:																												
H2O	18	32	212										1125	1125	1125	1125	2250	2250										
TOTAL				76905	5614	82519	82519	82519	84630	84630	84630	84630	1125	1125	1125	1125	2250	2250	112	1999								
TEMPERATURE °F				132	80	129	155	356	450	450	256	297	90	90	130	130	130	90	80	80								
PRESSURE - PSIA ('H2O G)				14.66 (-1)	14.7 (0)	14.45 (-7)	14.23 (-13)	14.09 (-17)	14.01 (-19)	13.29 (-39)	13.04 (-46)	14.77 (+2)							14.7	14.7								
DENSITY - LBS./CU.FT.				0.0642	0.0732	0.0638	0.0601	0.0449	0.0400	0.0380	0.0473	0.0507	62.4	62.4	62.4	62.4	62.4	62.4	0.0455									
VISCOSITY - C.P.																												
AVER.MOL.WT.				27.83	28.84	27.89	27.89	27.89	27.88	27.88	27.88	27.88							17.93	28.84								
FLOW - GPM													2.25	2.25	2.25	2.25	4.50	4.50										
SCFM (68°F & 1 ATMOS)				17751	1250	19002	19002	19002	19489	19489	19489	19489							40	445								
ACFM				19965	1279	21571	22871	30648	35255	37165	29803	27819							41	455								
TOTAL LB.MOLE/HR				2764.54	194.66	2959.20	2959.20	2959.20	3035.11	3035.11	3035.11	3035.11							6.25	69.31								

INCLUDES 3" WC DUCT LOSS

HEAT EXCHANGER	E-553/E-573 SUPERHEATER	E-554/E-574 CROSS EXCHANGER	F-551/F-571 CAT OX PREHEATER			
THEO.DUTY - BTU/HR.	565,000		2,400,000			
DESIGN DUTY	1,440,000	4,429,000	4,100,000			
M.T.D. = °F.	128	100				
AREA - FT.^{2}	698	10660				
U_c BTU/HR. - FT.^{2}-°F.	16.9	4.97				
U_D BTU/HR. - FT.^{2}-°F.	U_D=16.5 / U_S=16.1	U_D=4.95 / U_S=4.2				
FOULING FACTOR	0.0015	0.001				

LEGEND
◇ STREAM NUMBER
GPM
POUNDS/HR.
SCFM @ 68°F
TEMPERATURE °F
PSIG
STD VOL = 385.27 ft^3/lbM

FMT FILE NAME: 00014.FMT (22 34 PROCESS FLO SHT)
FMT CELL NAME: 00014

MATERIAL BALANCE FIGURES IN POUNDS PER HOUR WITH DESIGN CAPACITY OF - / DAY AT 24 HOURS/ DAY

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NO.	REVISIONS	DRAWN	CHKD.	APP.	DATE
4	REVISED PER TEAR NO. 20065208	MRG	JLM	JLM	08/09/07
3	REVISED PER TEAR NO. 20075059	MRG	JLM	JLM	04/16/07
2	REVISED PER TEAR NO. 20038076	MRG	SMS	SMS	06/03/03
1	AS-BUILT PER MACT PROJECT	CM	DER	RJH	09-23-02
0	ISSUE FOR CONSTRUCTION	KPK	DJH	RJH	01-22-02
0B	ISSUE FOR TNRCC	KPK	DJH	RJH	05-10-01
5	REVISED PER TEAR NO. 20055094	MRG	JLM	JLM	12/11/07

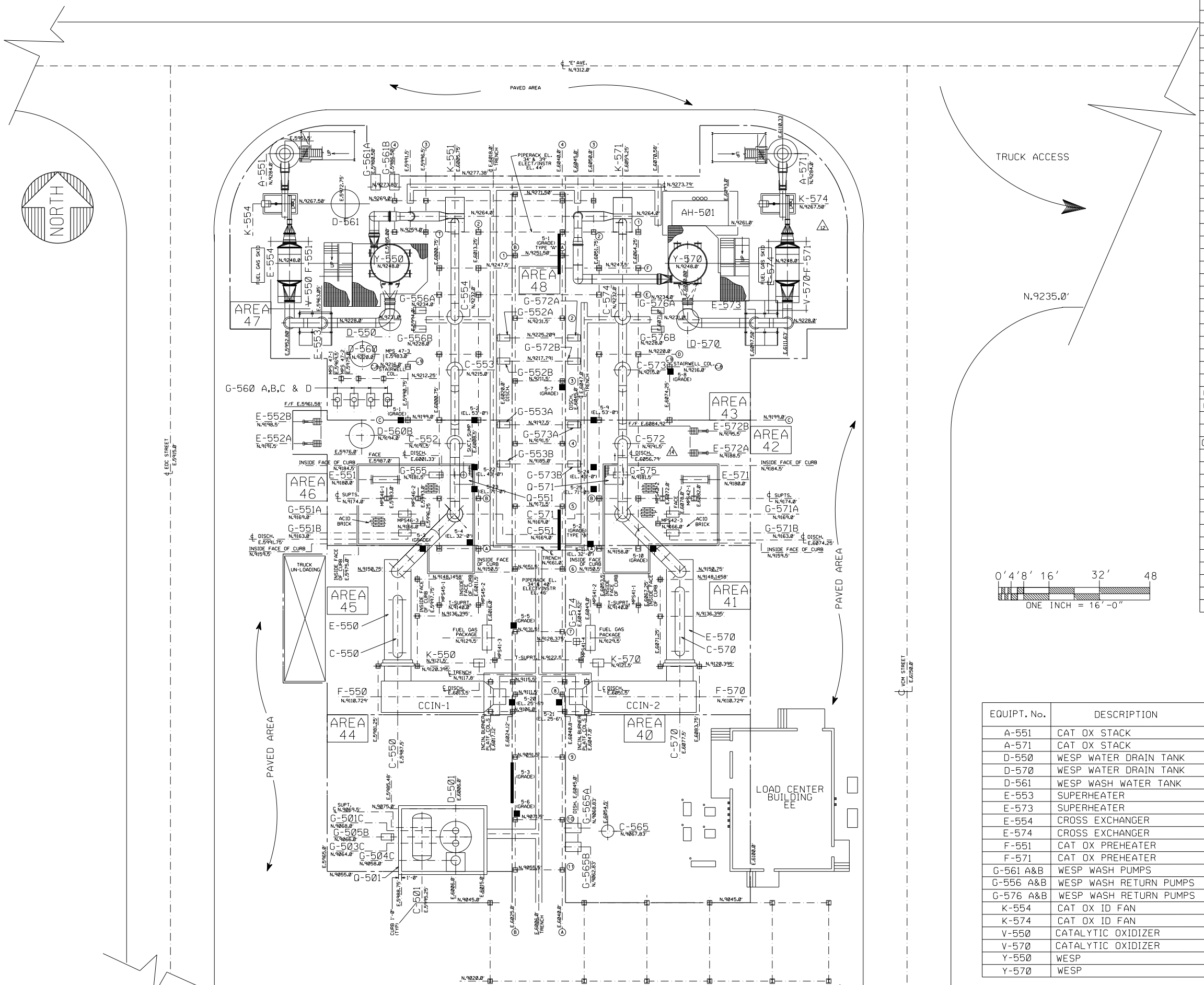
DRAFTSMAN CM DATE
PROCESS ENGR. DJH
PROCESS ENGR.
PROJECT APP.
FILE NAME: 5DB010.DGN

OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INGLESIDE, TEXAS

DWG. 5D-B-010 REV: 5

PROCESS FLOW SHEET
INGLESIDE MACT

MACT PROJECT
CCIN-1 / CCIN-2



0'4'8' 16' 32' 48
ONE INCH = 16'-0"

EQUIPT. No.		P.O.S. EL.
A-550	VENT STACK (REMOVED)	20'-6"
A-570	VENT STACK (REMOVED)	20'-6"
C-501	EDC PLANT DECOMMISSIONING DRUM	12'-11"
C-550	WASTE HEAT BOILER STEAM DRUM	℄ EL.33'-9"
C-551	HCL ABSORPTION COLUMN	20'-0"
C-552	DEHUMIDIFIER COLUMN	20'-0"
C-553	CAUSTIC SCRUBBER	20'-0"
C-554	VENT STACK KNOCK-OUT DRUM	20'-0"
C-565	VENTS COLLECTION K.O. DRUM	20'-0"
C-570	WASTE HEAT BOILER STEAM DRUM	℄ EL.33'-9"
C-571	HCL ABSORPTION COLUMN	20'-0"
C-572	DEHUMIDIFIER COLUMN	20'-0"
C-573	CAUSTIC SCRUBBER	20'-0"
C-574	VENT STACK KNOCK-OUT DRUM	20'-0"
D-501	DIRECT CHLOR./INCINERATION AREA STORM WATER SUMP	-
D-560	THIOSULFATE STORAGE TANK	20'-0"
E-550	INCINERATOR WASTE HEAT RECOVERY BOILER	21'-0"
E-551	10% HCL ACID COOLER	21'-3"
E-570	INCINERATOR WASTE HEAT RECOVERY BOILER	21'-0"
E-571	10% HCL ACID COOLER 12	21'-3"
E-552 A & B	DEHUMIDIFIER BOTTOM'S COOLERS (RE-LOCATED)	20'-0"
E-572 A & B	DEHUMIDIFIER BOTTOM'S COOLERS (RE-LOCATED)	20'-0"
F-550	No. 1 INCINERATOR FIRE BOX	21'-0"
F-570	No. 2 INCINERATOR FIRE BOX	21'-0"
G-501C	DIRECT CHLOR./INCINERATION AREA STORM WATER PUMP	20'-3"
G-503C	DIRECT CHLOR./INCINERATION AREA STORM WATER PUMP	20'-4"
G-504C	DIRECT CHLOR./INCINERATION AREA STORM WATER PUMP	20'-4"
G-505B	DIRECT CHLOR. DECOMMISSIONING PUMP	20'-11⅞"
G-575	INCINERATOR CHEMICAL SUMP PUMP	20'-6"
-	F-550/F-570 INCINERATOR FUEL GAS PACK.	20'-0"
G-551 A & B	ACID RECYCLE & TRANSFER PUMPS	20'-0"
G-552 A & B	DEHUMIDIFIER SUPPLY WATER PUMP	20'-0"
G-553 A & B	DEHUMIDIFIER RETURN WATER PUMP	20'-0"
G-555	INCINERATOR CHEMICAL SUMP PUMP	20'-6"
G-560A, B, C, D	THIOSULFATE TRANSFER PUMP	20'-0"
G-565A & B	WET VENTS K.O. DRUM PUMP	19'-11¼"
G-571A & B	ACID RECYCLE & TRANSFER PUMP	20'-0"
G-572A & B	DEHUMIDIFIER SUPPLY WATER PUMP	20'-0"
G-573A & B	DEHUMIDIFIER RETURN WATER PUMP	20'-0"
K-551	VENT DRAFT BLOWER	20'-6"
K-571	VENT DRAFT BLOWER	20'-6"
Q-551	INCINERATION CHEMICAL SUMP	-
Q-571	INCINERATION CHEMICAL SUMP	-
K-550	No. 1 INCINERATOR PREMIX BLOWER	20'-0"
K-570	No. 2 INCINERATOR PREMIX BLOWER	20'-0"
Q-501	DIRECT CHLOR./INCINERATION STORM WATER BASIN	-
G-574	HOMOGENIZER PUMP	-
D-560-B	THIOSULFATE STORAGE TANK	20'-0"

EQUIPT. No.	DESCRIPTION
A-551	CAT OX STACK
A-571	CAT OX STACK
D-550	WESP WATER DRAIN TANK
D-570	WESP WATER DRAIN TANK
D-561	WESP WASH WATER TANK
E-553	SUPERHEATER
E-573	SUPERHEATER
E-554	CROSS EXCHANGER
E-574	CROSS EXCHANGER
F-551	CAT OX PREHEATER
F-571	CAT OX PREHEATER
G-561 A&B	WESP WASH PUMPS
G-556 A&B	WESP WASH RETURN PUMPS
G-576 A&B	WESP WASH RETURN PUMPS
K-554	CAT OX ID FAN
K-574	CAT OX ID FAN
V-550	CATALYTIC OXIDIZER
V-570	CATALYTIC OXIDIZER
Y-550	WESP
Y-570	WESP

LEGEND:

■ —S.W.A.N. STATION
SWAN STATION NO.
(EL.)

■ — EMERGENCY SHOWER/EYE WASH
EYE WASH NO.
(EL.)

NO	REVISION	DATE	BY	TEAR	CHCK	ENG.
14	G-575 PER TEAR	06/05/03	JCR	20017600	HDL	HDL
13	AS-BUILT PER MACT PROJECT	11/21/02	CM		DER	
12	IFC FOR MACT PROJECT	09/19/01	DLB	156104	KPK	CN
11	G-555 PER TEAR 976776	01/29/98	JCR	976776	JEB	JEB
10	RELOCATE G-505B & REV. EQ. NO.	08/11/97	MRG	976380	AGC	JEB
9	ADD SAFETY SHOWERS 5-22, 23, 24, 25	07/16/96	SPJ	956052	MRG	EWD
8	ADDED D-560B	10/03/94	DE		JEB	JEB
7	ADDED PUMP G-574	10/05/93	ACC		JAR	JAR
6	REVISED TO SHOW G-565A/B	11/14/91	JEC	N/A	JEC	JEC

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OCCIDENTAL CHEMICAL CORP.
INGLESIDE PLANT
INGLESIDE, TEXAS

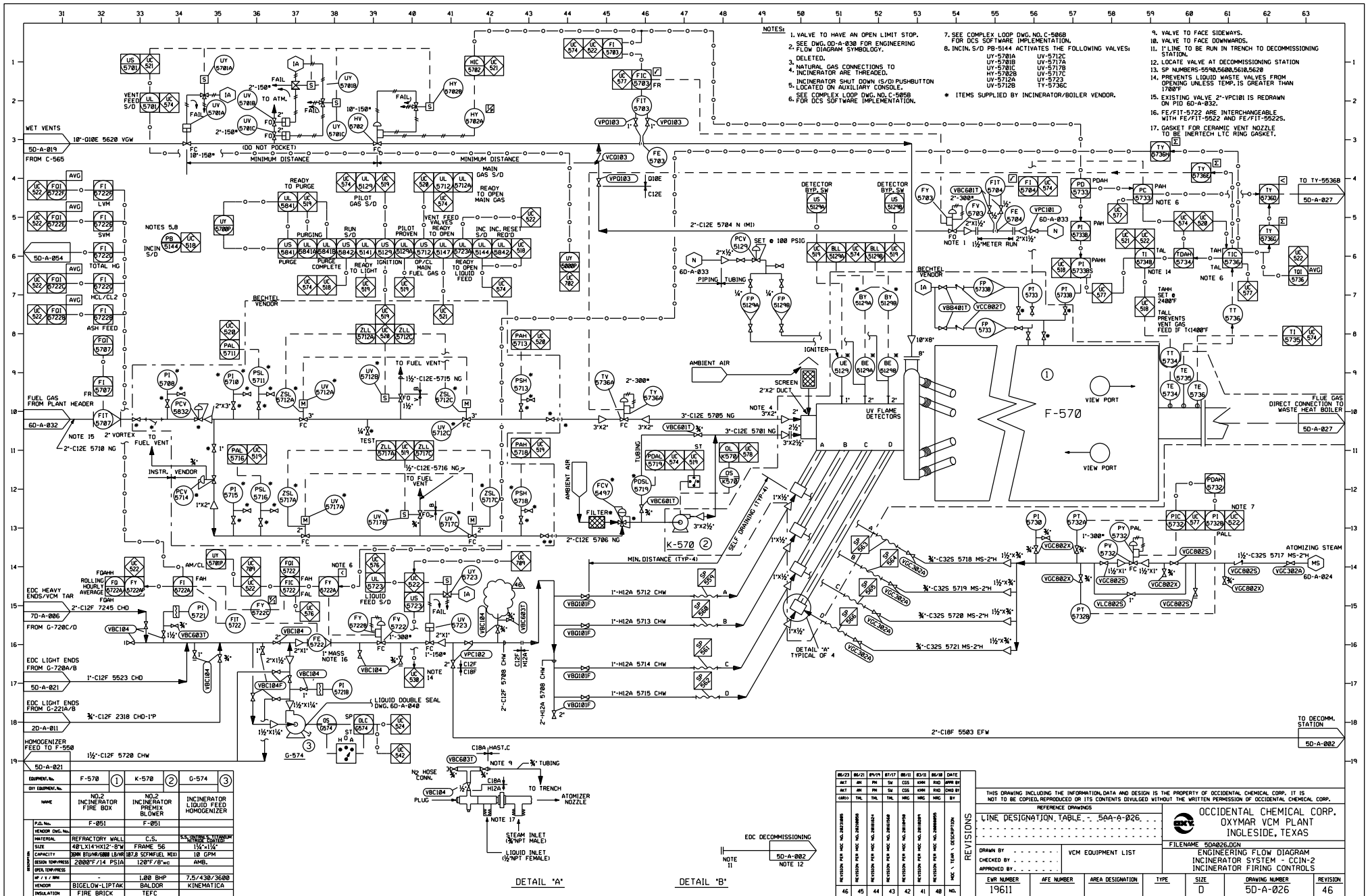
DRAWN BY V. WATSON | APP BY | SCALE: 1" = 16'-0"

PLOT PLAN INCINERATOR UNIT CCIN-1 AND CCIN-2

COST CENTER	TYPE	SIZE	DRAWING NUMBER	REVISION
			5D-00-A-500	14

9D-00A-901	PROCESS AREA PLOT PLAN
9D-00A-900	OVERALL MASTER PLAN

REFERENCE DRAWINGS



EQUIPMENT No.	F-570	①	K-570	②	G-574	③
DIV EQUIPMENT No.						
NAME	NO.2 INCINERATOR FIRE BOX		NO.2 INCINERATOR PREMIX BLOWER		INCINERATOR LIQUID FEED HOMOGENIZER	
P.O. No.	F-051		F-051			
VENDOR DWG. No.						
MATERIAL	REFRACTORY WALL		C.S.		S.S. (NITRIDE & TITANIUM NITRIDE COATED)	
SIZE	40'-LX14'-9X12'-8"W		FRAME 56		1¼"x1¼"	
CAPACITY	30MM BTU/HR/5000 LB/HR		187.8 SCFM/FUEL MIX		10 GPM	
DESIGN TEMP/PRESS	2000°F/14 PSIA		120°F/8"wc		AMB.	
OPER. TEMP/PRESS						
HP / V / RPM	-		1.00 BHP		7.5/430/3600	
VENDOR	BIGELOW-LIPTAK		BALDOR		KINEMATICA	
INSULATION	FIRE BRICK		TEFC			

DATE	BY	DESCRIPTION	REVISION PER MDC NO.
05/23	AKT	REVISION PER MDC NO.	46
05/21	AM	REVISION PER MDC NO.	45
09/19	PM	REVISION PER MDC NO.	44
07/17	SW	REVISION PER MDC NO.	43
09/11	CGS	REVISION PER MDC NO.	42
03/11	KMM	REVISION PER MDC NO.	41
05/10	RKD	REVISION PER MDC NO.	40
DATE	APPR BY	MDC \ TEAM \ DESCRIPTION	MDL

REVISIONS

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REFERENCE DRAWINGS
LINE DESIGNATION TABLE - 5AA-A-026

OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INGLESIDE, TEXAS

FILENAME 5D0026.DGN

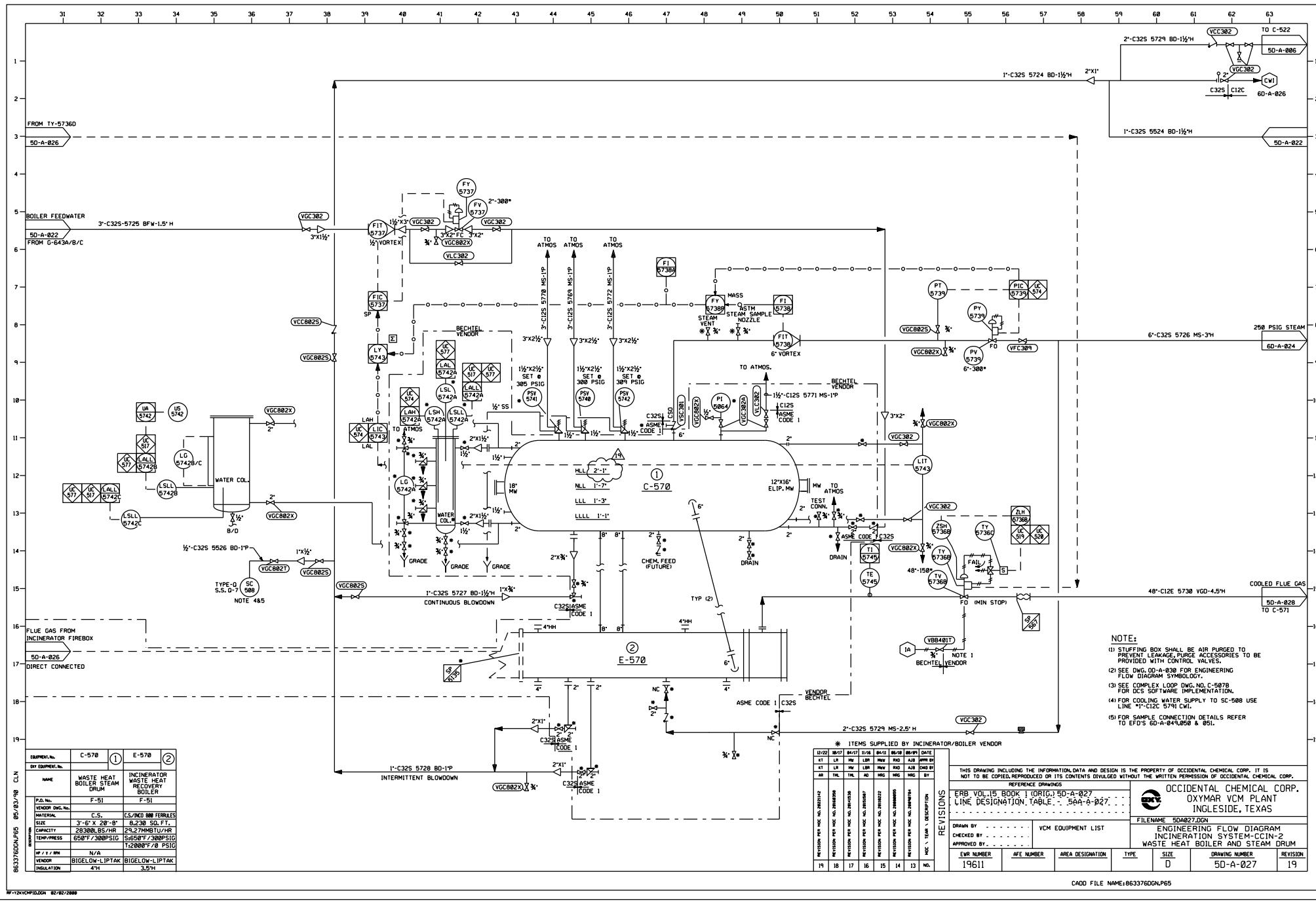
DRAWN BY
CHECKED BY
APPROVED BY
VCM EQUIPMENT LIST

ENGINEERING FLOW DIAGRAM
INCINERATOR SYSTEM - CCIN-2
INCINERATOR FIRING CONTROLS

EWR NUMBER	AFE NUMBER	AREA DESIGNATION	TYPE	SIZE	DRAWING NUMBER	REVISION
19611				D	5D-A-026	46

863376DGN.P63

RF-Y2KVCMPIDLOGN 02/02/2000



EQUIPMENT No.	C-570 ①	E-570 ②
DIV EQUIPMENT No.		
NAME	WASTE HEAT BOILER STEAM DRUM	INCINERATOR WASTE HEAT RECOVERY BOILER
P.O. No.	F-51	F-51
VENDOR DWG. No.		
MATERIAL	C.S.	C.S./INCO 800 FERRULES
SIZE	3'-6" X 20'-8"	8,230 SQ.FT.
CAPACITY	28300LBS/HR	29.27MMBTU/HR
TEMP/PRESS	650°F/300PSIG	5650°F/300PSIG T:2000°F/0 PSIG
HP / # / RPM	N/A	
VENDOR	BIGELOW-LIPTAK	BIGELOW-LIPTAK
INSULATION	4"H	3.5"H

DATE	BY	DESCRIPTION	REVISION PER MDC NO.
12/22	KT	REVISION PER MDC NO.	28221142
08/17	LR	REVISION PER MDC NO.	28182259
04/17	MW	REVISION PER MDC NO.	28141538
11/16	LBR	REVISION PER MDC NO.	28135587
04/11	MAW	REVISION PER MDC NO.	28135222
06/08	RAD	REVISION PER MDC NO.	28088805
05/01	AJB	REVISION PER MDC NO.	28098784
DATE	APPR BY	MDC \ TEAM \ DESCRIPTION	
	CHKD BY	REVISIONS	
	BY	NO.	
19	18	17	16	15	14	13	

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REFERENCE DRAWINGS
ERB VOL.15 BOOK 1 (ORIG.) 5D-A-027
LINE DESIGNATION TABLE - 5AA-A-027

OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INGLESIDE, TEXAS

FILENAME 5DA027.DGN

DRAWN BY
CHECKED BY
APPROVED BY
VCM EQUIPMENT LIST

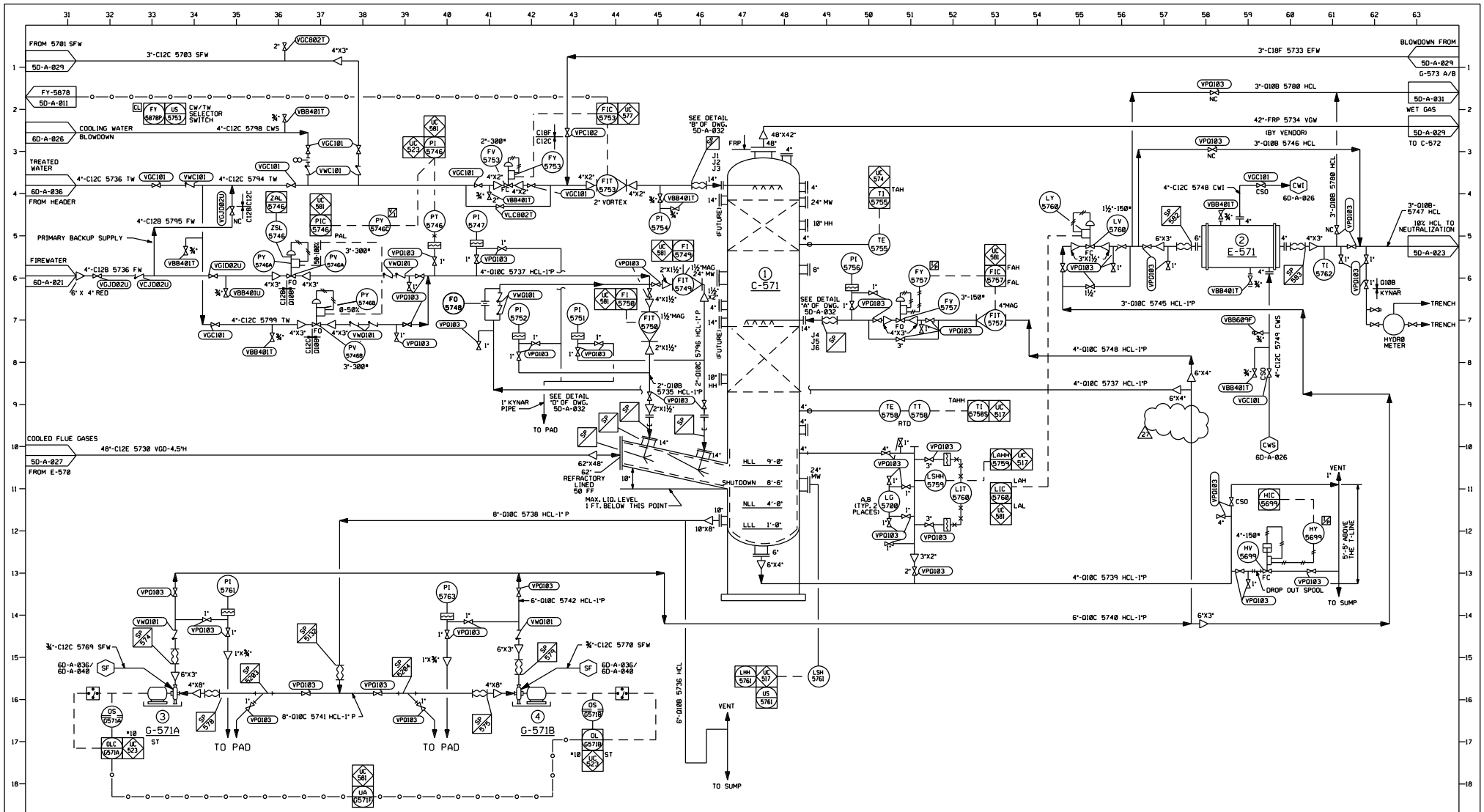
ENGINEERING FLOW DIAGRAM
INCINERATION SYSTEM-CCIN-2
WASTE HEAT BOILER AND STEAM DRUM

EWR NUMBER	AFE NUMBER	AREA DESIGNATION	TYPE	SIZE	DRAWING NUMBER	REVISION
19611				D	5D-A-027	19

CADD FILE NAME:863376DGN.P65

863376DGN.P65 05/03/98 CLN

RF-Y2K\VCMPIDLDGN 02/02/2000


FROM 5701 SFW
50-A-029
3"-C12C 5703 SFW
2"
VGC802T
4"X3"
FY-5878
50-A-011
CW/TW SELECTOR SWITCH
COOLING WATER BLOWDOWN
60-A-026
4"-C12C 5798 CWS
TREATED WATER
60-A-036
FROM HEADER
4"-C12C 5736 TW
4"-C12C 5794 TW
4"-C12B 5795 FW
PRIMARY BACKUP SUPPLY
FIREWATER
60-A-021
4"-C12B 5736 FW
6" X 4" RED
4"-C12C 5799 TW
COOLED FLUE GASES
48"-C12E 5730 VGD-4.5"H
50-A-027
FROM E-570
3"-C18F 5733 EFW
BLOWDOWN FROM
50-A-029
G-573 A/B
3"-D10B 5780 HCL
50-A-031
WET GAS
42"-FRP 5734 VGW
(BY VENDOR)
TO C-572
3"-D10B 5746 HCL
4"-C12C 5748 CWI
60-A-026
3"-D10B-5747 HCL
10% HCL TO NEUTRALIZATION
50-A-023
KYNAR
TRENCH
HYDRO METER
4"-C12C 5749 CWS
4"-D10C 5748 HCL-1"P
4"-D10C 5737 HCL-1"P
3"-D10C 5745 HCL-1"P
4"-D10C 5739 HCL-1"P
6"-D10C 5740 HCL-1"P
8"-D10C 5738 HCL-1" P
6"-D10B 5736 HCL
8"-D10C 5741 HCL-1" P
6"-D10C 5742 HCL-1"P
¾"-C12C 5769 SFW
¾"-C12C 5770 SFW
60-A-036/ 60-A-040
1"X¾"
1"X1"
1"X¾"
1"X¾"
1"X1"
1"X¾"
1"X1"
1"X¾"
1"X1

RF=I2XVCHP1D.DGN 02/02/2000

EQUIPMENT No.	C-572 (1)	C-573 (2)	G-573A (3)	G-573B (4)	G-572A (5)	G-572B (6)	E-572A (7)	E-572B (8)
NAME	DEHUMIDIFIER COLUMN	CAUSTIC SCRUBBER	DEHUMIDIFIER REHEAT PUMP	DEHUMIDIFIER REHEAT PUMP	DEHUMIDIFIER SUPPLY WATER PUMP	DEHUMIDIFIER SUPPLY WATER PUMP	DEHUMIDIFIER BOTTOM COOLER	DEHUMIDIFIER BOTTOM COOLER
P.O. No.	D-04	D-04	G-01	G-01	G-01	G-01	E-41	E-41
VENDOR DWG. No.								
MATERIAL	FRP/PVC LINER	FRP	ALLOY 20	ALLOY 20	ALLOY 20	ALLOY 20	T1	T1
SIZE	6'-0" DIA X 33'-6"	6'-0" DIA X 33'-6"	4X6-18	4X6-18	4X6-18	4X6-18	49S SQ. FT.	49S SQ. FT.
CAPACITY	6800 GAL	6800 GAL	1150 GPM	1150 GPM	1150 GPM	1150 GPM	3.28X10⁶ BTU/HR	3.28X10⁶ BTU/HR
TEMP/PRESS	175°F/-50"WC	175°F/-50"WC	103°F/115PSIG	103°F/115PSIG	103°F/115PSIG	103°F/115PSIG	140°F/150PSIG	140°F/150PSIG
INSULATION	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
VENDOR	MESH PLASTICS	MESH PLASTICS	COULOS	COULOS	COULOS	COULOS	APY CHEMCO	APY CHEMCO
HP / V / RPM	N/A	N/A	125/460/1800	125/460/1800	125/460/1800	125/460/1800		

NOTES:
1. ALL VALVES ON FRP LINES WILL BE CPVC.
2. ANALYZER SAMPLE POINT TAKE OFF SHOULD BE ½"-150 LB. FLANGE PER PIPING SPEC. ANALYZER RETURN POINT SHOULD BE 1" FLANGED VALVE.
3. SEE DWG. 00-A-030 FOR ENGINEERING FLOW DIAGRAM SYMBOLOGY.
4. FOR SAMPLE CONNECTION DETAILS REFER TO EFD'S 60-A-049, 050 & 051. USE FOLLOWING LINE NOS. FOR SAMPLE CONNECTIONS SC-510: ¾"-C18F 5776 EFW SC-511: ¾"-C18F 5776 EFW
5. INSULATE FOR FREEZE PROTECTION.
6. SEE COMPLEX LOOP DWG. C-534B FOR DCS SOFTWARE IMPLEMENTATION.
7. PULL INSERTED POINING IN FLOW DIRECTION.

NO.	DATE	BY	REVISIONS
20	11/16	CHR	REVISION PER MOC NO. 2013112
19	06/10	CHR	REVISION PER MOC NO. 2008805
18	10/08	CHR	REPLACE BYPASS LINE BELOW LV-5793 PER AS BUILT
17	07/07	CHR	REVISION PER TEAR NO. 2005514
16	06/06	CHR	REVISED PER TEAR NO. 2003813R
15	04/03	CHR	REVISION PER TEAR NO. 2005238

DRAWN BY	VCM EQUIPMENT LIST	TYPE	SIZE	DRAWING NUMBER	REVISION
CHECKED BY			D	50-A-029	20
APPROVED BY					

ENGINEERING FLOW DIAGRAM
INCINERATION SYSTEM - CCIN-2
D/H COLUMN AND CAUSTIC SCRUBBER

FILENAME 50A029.DGN

OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INCLESIDE, TEXAS

REFERENCE DRAWINGS

ERB VOL.15 BOOK 1 (ORIG.) 50-A-029
LINE DESIGNATION TABLE - 5AA-A-029

EWR NUMBER | AFE NUMBER | AREA DESIGNATION

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RF:VXVCHP1D.DGN 02/02/2000

EQUIPMENT No.			C-574 (1)	(2)	K-571 (3)
DXT EQUIPMENT No.					
NAME			VENT STACK KNOCK-OUT DRUM		VENT DRAFT BLOWER
P.O. No.			D-04		K-06
VENDOR DWG. No.					
MATERIAL			FRP		HMST ROTOR/FRP CASE
SIZE			6'-0" ID X 10'-0" TT		17600 ACFM
CAPACITY			1978 GAL		
DESIGN TEMP/PRESS			175°F -50"WC		175°F /1 PSIG
HP / V / PPH			N/A		150/480/1780
VENDOR			MESH PLASTICS		BUFFALO FORGE
INSULATION			NONE		NONE

REVISIONS												
NO.	MOC \ TEAR \ DESCRIPTION	DATE	BY									
-12	REVISED PER SAP 2000	02/03	SRS	SRS	BXD	BXD	BXD	BXD	BXD	BXD	BXD	BXD
-18	REVISED PER SAP 2000	02/05	SRS	BXD	BXD	BXD	BXD	BXD	BXD	BXD	BXD	BXD
-19	REVISION PER TEAR NO. 20055134	03/06	BXD	BXD	BXD	BXD	BXD	BXD	BXD	BXD	BXD	BXD
-20	REVISION PER MOC NO. 20060005	03/10	BXD	BXD	BXD	BXD	BXD	BXD	BXD	BXD	BXD	BXD
-21	REVISION PER MOC NO. 20010001	05/11	BXD	BXD	BXD	BXD	BXD	BXD	BXD	BXD	BXD	BXD

EWR NUMBER	AFE NUMBER	AREA DESIGNATION	TYPE	SIZE	DRAWING NUMBER	REVISION
19611				D	5D-A-030	21

DRAWN BY
CHECKED BY
APPROVED BY

VCM EQUIPMENT LIST

ENGINEERING FLOW DIAGRAM
INCINERATION SYSTEM - CCIN-2
KNOCK-OUT DRUM, FAN AND STACK

FILENAME 5DA030.DGN

OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INCLESIDE, TEXAS

REFERENCE DRAWINGS

ERB VOL.15 BOOK 1 (ORIG.) 5D-A-030
LINE DESIGNATION TABLE - 5AA-A-030

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NOTES:
1. NORMAL LEVEL AT C-574 MUST BE ABOVE NORMAL LEVEL AT C-573.
2. SEE DWG. 0D-A-030 FOR ENGINEERING FLOW DIAGRAM SYMBOLOGY.
3. ATTACHMENT PIPING FOR VCH IS C12F AND FOR VCW IS P10C.

* ITEMS SUPPLIED WITH EQUIPMENT.

K-571 PERMISSIVE SD

LOCATE IN MCC

LOCATE SAME ELEVATION

TRANSITION PIECE 14"X23" BLOWER INLET

TRANSITION PIECE 13"X49" TO 28"X40" BLOWER OUTLET (TRANSITION PIECE)

TEFLON TUBING (NO POCKET)

CONNECTIONS 90° APART LOCATE SAMPLE

MINIMUM 6.5 DIAMETERS

BREAKER VACUUM

GRADE TO

SCRUBBER VAPOR

SPARE

TO AY-5626

TO C-572B

C-574 DRAIN

TO WESP

FROM C-573

NOTE 1

NOTE 3

BY VENDOR

(GRAVITY FLOW)

(FILTER)

TUBING ½" ø

SEAL

VENT

MIN

MAX

2'-0"

3'

30"

40"

24"

36"

6"

2"

4"

½"

¾"

1"

1½"

2½"

3"

6D-A-026

6D-A-027

6D-A-028

6D-A-036

1-C12C-5722-SFW

1-C12C-5720-SFW

1-C12C-5719-EFW

1-C12C-5712-UA

1-C12C-5791 CWI

1-C12C-5790 CWS

1-C12C-5770-CWR

1-P10C-5721-EFW

1-P10C-5722-EFW

1-D10B 5792 HCL

1-D10B 5793 HCL

3-P10C-5719-EFW

30"-FRP 5712 VGW

36"-FRP 5712 VGW

28"X40"-FRP 5788 VGW

24"-FRP 5787 VGW

36"-FRP 5711 VGW

36"-FRP 5751 VGW

36"-FRP 5785 VGW

30"X36"

24"X30"

24"X9"

16"-150#

S.C.

FO

CWI

CWS

SPARE

TRHRST

PCVH

PCVC

PDAH

PDAL

PAH

PAL

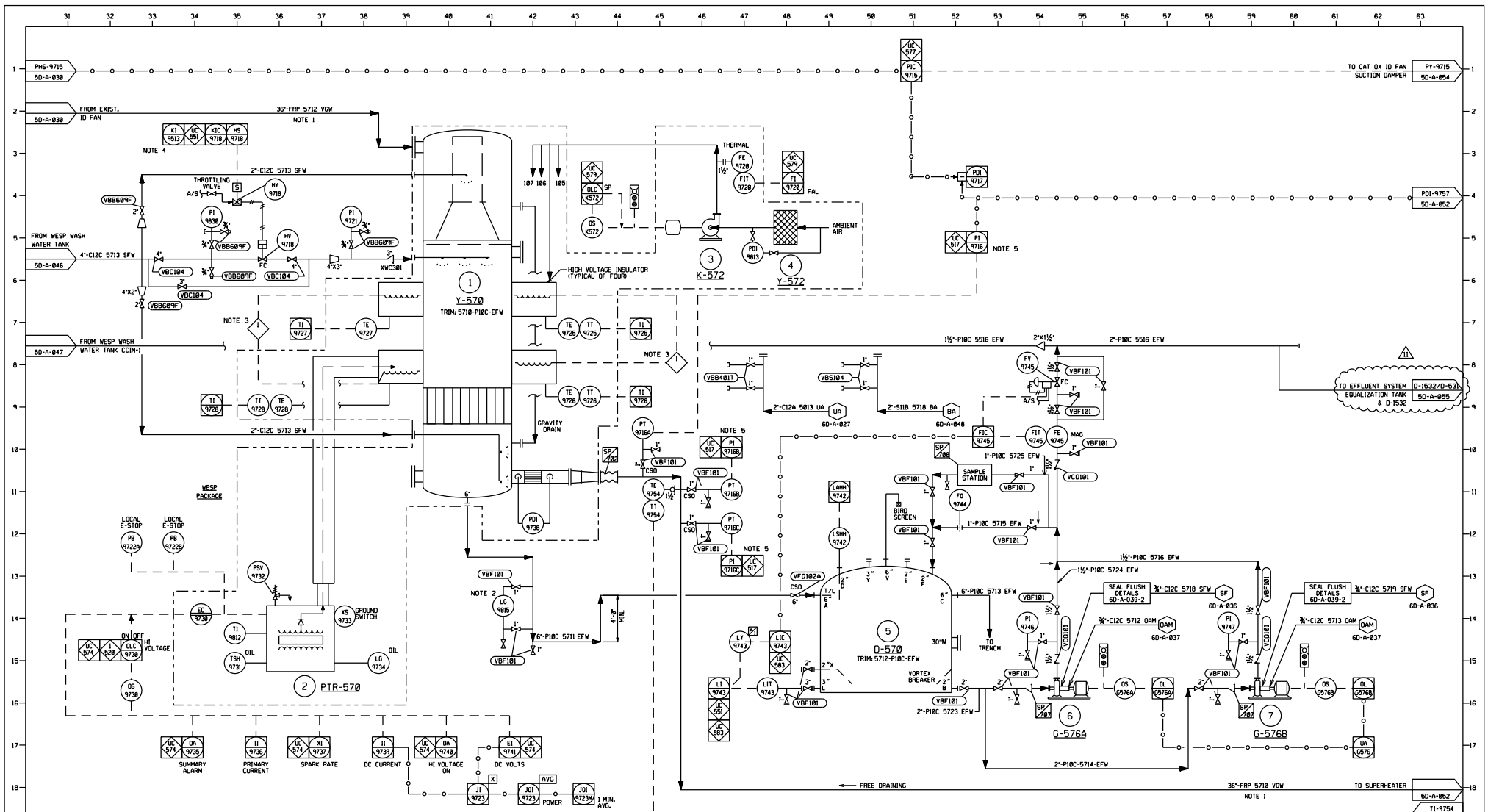
TAH

VACUUM

VENT

VENT

VENT



EQUIPMENT No.	Y-570 (1)	PTR-570 (2)	K-572 (3)	Y-572 (4)	D-570 (5)	G-576A (6)	G-576B (7)
PLANT ID.							
NAME:	WESP (WET ELECTROSTATIC PRECIPITATOR)	WESP TRANSFORMER/ RECTIFIER	WESP PURGE AIR BLOWER	WESP PURGE AIR BLOWER FILTER	WESP WATER DRAIN TANK	WESP WATER RETURN PUMP No.1	WESP WATER RETURN PUMP No.2
DESCRIPTION P.O. No.:							
DWG. No.:							
MATERIAL:	HET FR 992/HAST C		FRP		DERAKANE 411	ALLOY 20	ALLOY 20
SIZE:	12'DIAx41'		A4.3-9-16-F100FG		7'DIAx8'	LF3196 1X1.5-8	LF3196 1X1.5-8
CAPACITY:	20000 ACFM	84kW	1000 CFM		2300 GAL	20 GPM, 118'	20 GPM, 118'
TEMP/PRESS:	180°F/-40,-30IN. WC		/3.5 IN WC				
HP/V/RPM:	MODEL 1013-121		3/460/1800			5/460/3600	5/460/3600
WEIGHT:							
VENDOR:	GEOENERGY	GEOENERGY	GEOENERGY/ HARTZELL	GEOENERGY	AUGUSTA FIBERGLASS	ITT GOULDS	ITT GOULDS

NOTES:
1. ATTACHMENT PIPING FOR VGH IS C12F AND FOR VGW IS P10C.
2. LOCATE LG-9815 SO THAT IT READS THE LEVEL IN THE SEAL LEG (WHERE IT BENDS TO RUN TO D-570).
3. HEATER ELEMENT CONTROL IS WIRED TO THE PURGE AIR BLOWER STARTER. THE ELEMENTS COME ON AND STAY ON WHEN THE BLOWER IS RUNNING.
4. K1-9513 (WAIT TIMER) COMMON TO BOTH WASH SEQUENCES.
5. 2 OUT OF 3 VOTING LOGIC.

REVISIONS	02/15	05/12	06/28	07/07	04/07	DATE
	CHR	RHD	RHD	RHD	JLM	APPR BY
	CHR	RHD	RHD	RHD	JLM	CHKD BY
	MAG	mag	MRG	MRG	MRG	BY
	REVISION PER MCC NO. 20120687 & ADDITION OF VGW DI'S10 #5 & MONITOR 4	REVISION PER MCC NO. 20120825	REVISION PER TEAM NO. 20120312	REVISION PER TEAM NO. 20070694 & NEW TITLE	MCC \ TEAM \ DESCRIPTION	
	11	10	9	8	7	NO.

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REFERENCE DRAWINGS
LINE DESIGNATION TABLE - 5AA-A-051

DRAWN BY
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VCM EQUIPMENT LIST

OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INGLESIDE, TEXAS

FILENAME 5DA051.DGN

ENGINEERING FLOW DIAGRAM
WESP
CCIN-2

EWR NUMBER	AFE NUMBER	AREA DESIGNATION	TYPE	SIZE	DRAWING NUMBER	REVISION
				D	5D-A-051	11

RF-Y2KVCMPID.DGN 02/02/2000

RF:Y2XVCHP1D.DGN 02/02/2000

EQUIPMENT No.	D-561	G-561A (2)	G-561B (3)
PLANT ID.			
NAME:	WESP WASH WATER TANK	WESP WASH PUMP No.1	WESP WASH PUMP No.2
P.O. No.:			
DWG. No.:			
MATERIAL:	DERAKANE 411	DI	DI
SIZE:	9'DIAx10'	3196 2X3-8	3196 2X3-8
CAPACITY:	4700 GAL	198 GPM, 200'	198 GPM, 200'
TEMP/PRESS:			
HP/V/RPM:		25/460/3600	25/460/3600
WEIGHT:			
VENDOR:	AUGUSTA	ITT GOULDS	ITT GOULDS

DESCRIPTION		FIBERGLASS	APISEAL PLAN 11	APISEAL PLAN 11

REVISIONS									
NO.	MOC \ YEAR \ DESCRIPTION	BY	CHKD BY	APPR BY	DATE
0	MACT PROJECT ISSUED FOR CONSTRUCTION	KK	DJH	RJH	10/01
1	MACT PROJECT AS-BUILT	KK	DJH	RJH	06/02
2	AS-BUILT PER MACT PROJECT	CM	DJH	RJH	09/02

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REFERENCE DRAWINGS

LINE DESIGNATION TABLE - 5AA-A-046

OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INCLESIDE, TEXAS

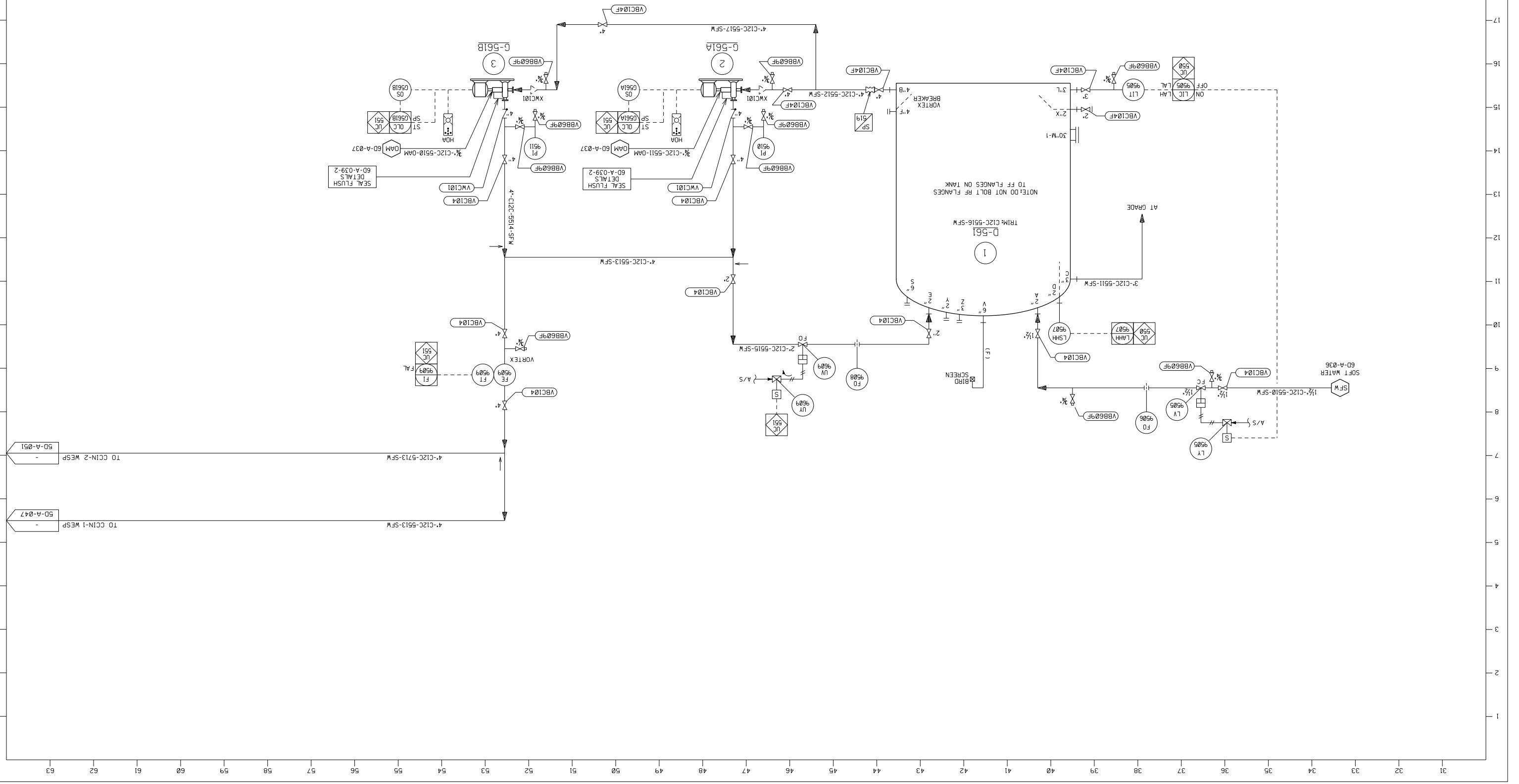
FILENAME 5DA046.DGN

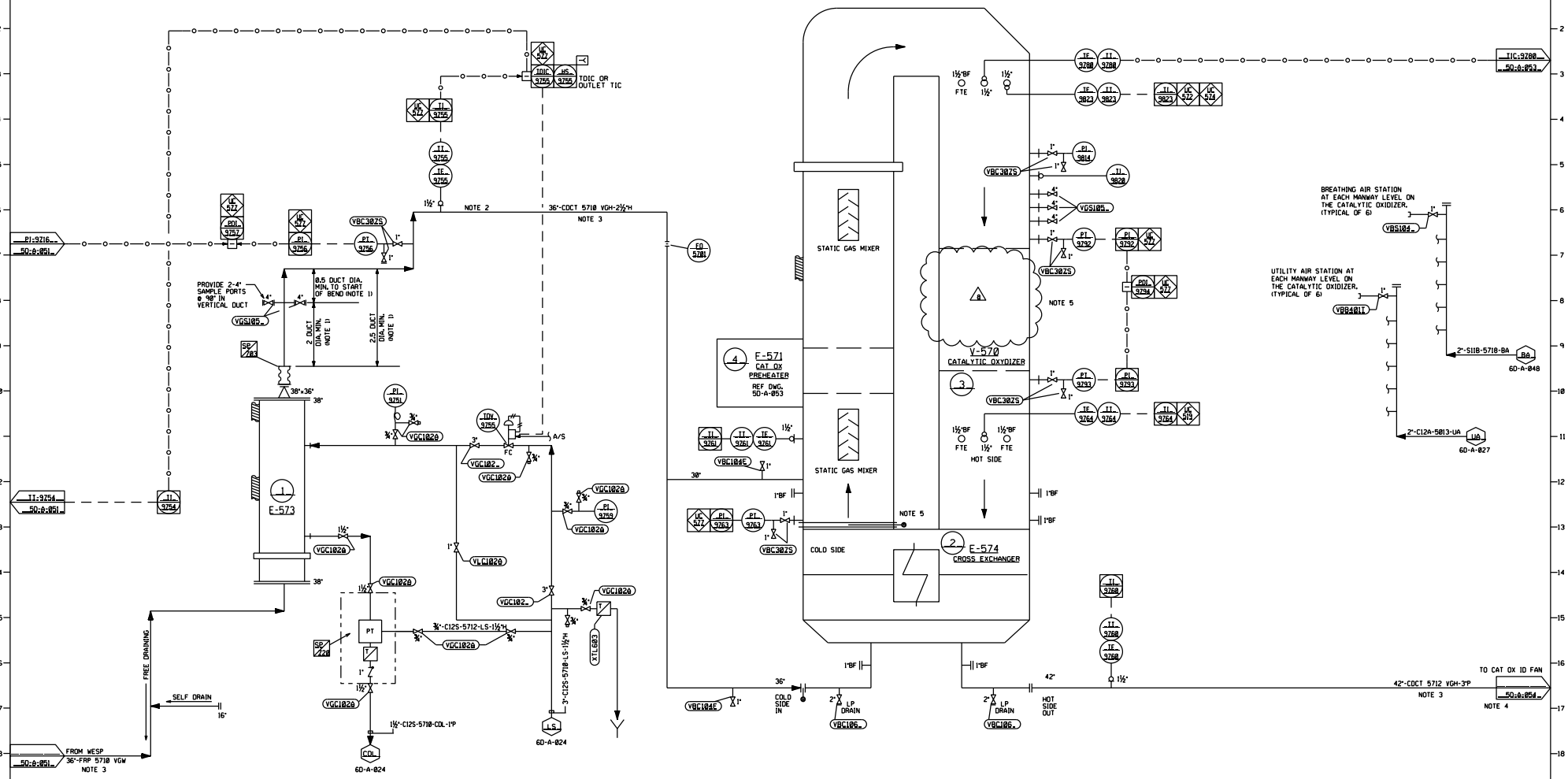
DRAWN BY
CHECKED BY
APPROVED BY

VCM EQUIPMENT LIST

ENGINEERING FLOW DIAGRAM
WESP WASH WATER TANK
CCIN-1 / CCIN-2

EWR NUMBER	AFE NUMBER	AREA DESIGNATION	TYPE	SIZE	DRAWING NUMBER	REVISION
				D	5D-A-046	2





EQUIPMENT No.	E-573 (1)	E-574 (2)	V-570 (3)		(5)	F-571 (4)
PLANT ID.						
NAME:	SUPERHEATER	CROSS EXCHANGER	CATALYTIC OXYDIZER	CATALYST		CATOX PREHEATER (DWG 5D-A-053)
P.O. No.:						
DWG. No.:						
MATERIAL:	CS/HAST C	CS/CS	CS	DNX - 930		
SIZE:	37"x72"BEM			11.8 M3 TOTAL		
CAPACITY:	698 FT2	10660 FT2	36000 ACFM	3 BEDS @		
TEMP/PRESS:	(S)1400°F/150 PSIG FV	(H)700°F/-3.3 PSIG	(H)700°F/+3.3 PSIG	750 LBM NET HT EACH		
HP/V/RPM:	(T)300°F/14 PSIG	(C)550°F/-3.3 PSIG				
WEIGHT:						
VENDOR:	KENNEDY	BDT	BDT	BDT / HALDOR TOPSOE		

DESCRIPTION

NOTES:

1. THE SAMPLE PORT DIMENSIONS AS SHOWN ARE REQUIRED TO MEET MINIMUM UPSTREAM/ DOWNSTREAM FLOW DISTURBANCE CRITERIA. WHERE ADDITIONAL LENGTH IS AVAILABLE, IT IS PREFERABLE TO KEEP THE RATIO OF THE UPSTREAM LENGTH-TO-DOWNSTREAM LENGTH AT, OR NEAR, 4 TO 1. IF NO ADDITIONAL SIGNIFICANT STRUCTURE IS REQUIRED.
2. ⅛" CORROSION ALLOWANCE.
3. ATTACHMENT PIPING FOR VGH IS C12F AND FOR VGW IS P10C.
4. PROVIDE ACCOUSTIC INSULATION FOR ID FAN INLET DUCTING.
5. OUTLET OF CROSS EXCHANGER HAS BLIND FOR ISOLATION.

REVISIONS					
				05/21	05/28
				KJ	BJG
				KJ	BJG
				DM	WBC
				REVISION PER MOC NO. 20210604	REVISION PER MOC NO. 20220502
				MOC \ ITEM \ DESCRIPTION	
				8	9

DATE
APPR BY
CHKD BY
BY
NO.

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REFERENCE DRAWINGS
LINE DESIGNATION TABLE - 5AA-A-052

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APPROVED BY

VCM EQUIPMENT LIST

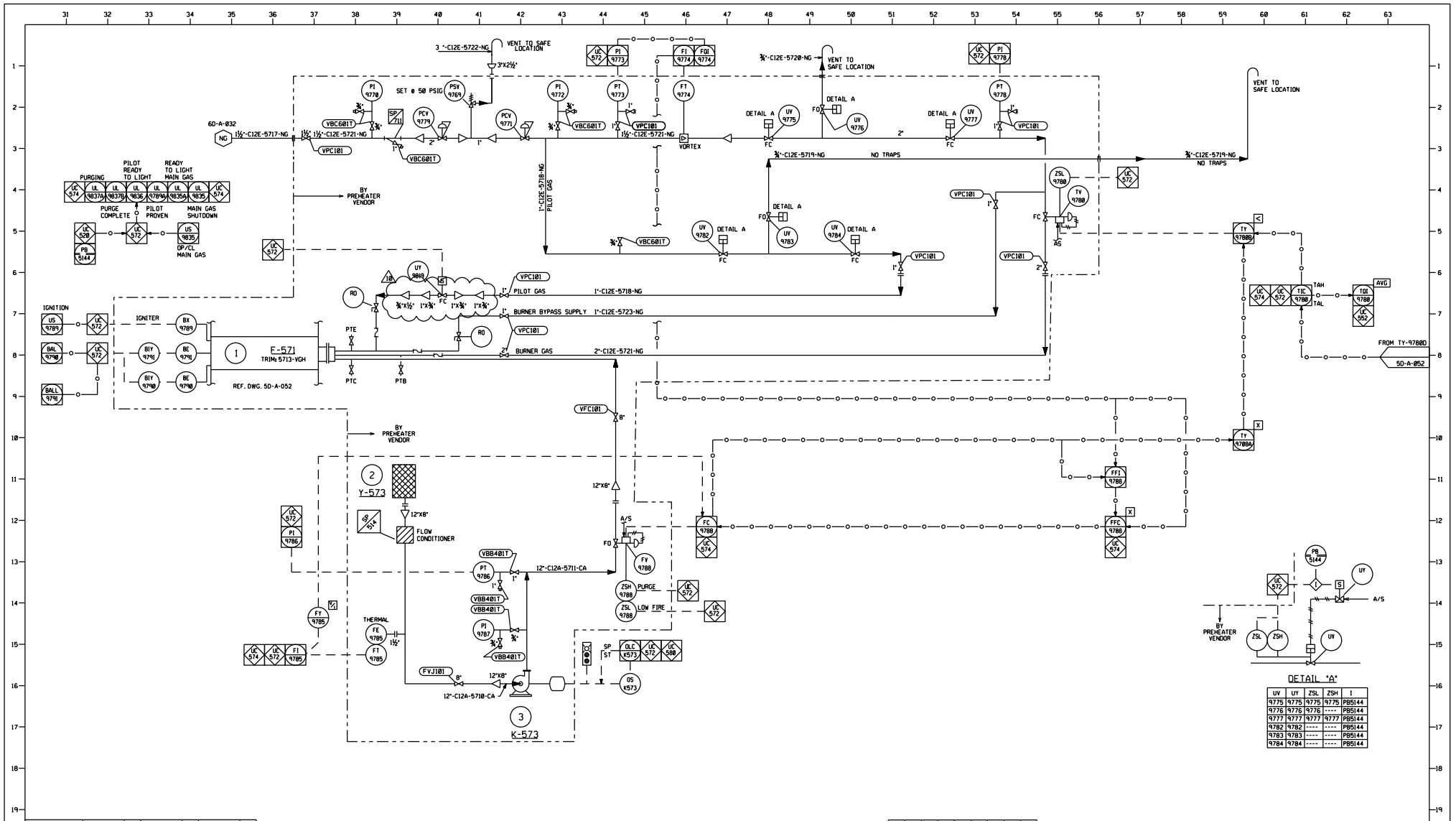
OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INGLESIDE, TEXAS

FILENAME 5DA052.DGN

ENGINEERING FLOW DIAGRAM
SUPERHEATER & CATALYTIC OXIDIZER
CCIN-2

EWR NUMBER	AFE NUMBER	AREA DESIGNATION	TYPE	SIZE	DRAWING NUMBER	REVISION
				D	5D-A-052	9

RF:Y2KVCMPIDLOGN 02/02/2000



EQUIPMENT No.	F-571 (1)	Y-573 (2)	K-573 (3)
PLANT ID.			
NAME:	CAT OX PREHEATER	CAT OX PREHEATER AIR FILTER	CAT OX PREHEATER BLOWER
DESCRIPTION P.O. No.:			
DWG. No.:			
MATERIAL:	CS/INCONEL		CS
SIZE:		MODEL 12 CCF	2608A
CAPACITY:	5 MM BTU/HR		1625 CFM
TEMP/PRESS:	1600 F FIRE TUBE		@ 52.5 INCHES WC
HP/V/RPM:			50/460/3550
WEIGHT:			
VENDOR:	BDT/UNIVERSAL	UNIVERSAL	NYB

UV	UY	ZSL	ZSH	I
9775	9775	9775	9775	PB5144
9776	9776	9776	----	PB5144
9777	9777	9777	9777	PB5144
9782	9782	----	----	PB5144
9783	9783	----	----	PB5144
9784	9784	----	----	PB5144

REVISIONS							
						05/20	05/14	05/14	05/18	DATE
						AM	WLG	WLG	RHD	APPR BY
						AM	WLG	WLG	RHD	CHKD BY
						THL	JMD	JMD	MRG	BY
						REVISION PER MCC NO. 2830111	REVISION PER MCC NO. 2834079 CHANGE F-M ON Y-573 BLOWER	REVISION PER MCC NO. 2837814 ADD 1" PIPING FOR Y-573	REVISION PER MCC NO. 2888885	MCC \ TEAM \ DESCRIPTION
						10	9	8	7	NCL

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REFERENCE DRAWINGS
LINE DESIGNATION TABLE - 5AA-A-053

OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INGLESIDE, TEXAS

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VCM EQUIPMENT LIST

FILENAME 5DA053.DGN

ENGINEERING FLOW DIAGRAM
CAT OX PREHEATER
CCIN-2

EWR NUMBER	AFE NUMBER	AREA DESIGNATION	TYPE	SIZE	DRAWING NUMBER	REVISION
				D	5D-A-053	10

RF-Y2KVCMPID.DGN 02/02/2000

PIC-9715
5D-A-051

FROM CROSS EXCHANGER
5D-A-052
42"-CDCT 5712 VGH-3"P
(NOTE 2 & 7)

FI-57220
5D-A-048

UC 514
AQI 58220 AVG
NOTE 10

AI 58220

TI 9796
TI 9798
TE 9798

CORR CL2 AI 5825C → RAW CL2 AI 5825B
CORR CO AI 5826C → RAW CO AI 5826B
CORR O2 AI 5961C → RAW O2 AI 5961B

UL 58260 AUTO CAL SELECTED
ON=AUTO
OFF=MANUAL

AM/CL
UC 535

(CEMS) AU 5785

AY 5625
AY 5626
AY 5624B

ROLLING HOURLY AVERAGE AQ 5624B

AAH AI 5624B
AIT 5624 VCM
LOCATED IN AH-501
STREAM 2/VCM

UC 522
UL 58266 CEMS SYS FAIL

CORR CL2
US 5825 CALIB BYP.SW
AAH AI 5825
AIT 5825 CL2

UC 522
UL 58268 AUTO CAL IN PROGRESS
UC 530
UC 535

HOURLY AVERAGE AI 58260
AAHH AQ 58260 AAH
UC 522
NOTE 4

CALIB BYP.SW US 5826

AI 58258

0-200 AIT 58264 CO
0-3000 AIT 58268 CO

TO ATM
AE 5826 NOTE 1
VBE102
½" TEFLON TUBING INSULATED
NOTE 1
AP 5826
VBC106E
2"x1"
2"

CORR O2
AAL AI 5961
US 5961 CALIB BYP.SW
UC 530
UC 522
AQ 5961 NOTE 4
UC 535
AIT 5961 O2

A-571

1 STACK DIAMETER MINIMUM
2 STACK DIAMETERS MINIMUM
3"
NOTE 8
2@4" SC
VGS105 (2)
NOTE 9
4-4" SAMPLE CONNECTIONS LOCATED 90° APART. PROVIDE 360° SAMPLING PLATFORM.

THERMAL MASS
FE 5823 NEW
FIT 5823 NEW
FI 5823 FAH FAL FALL
UC 577
UC 572
UC 536
US 5826
UL 5826CC
FQ 58236
FQI 58236 AVG FAH FAHH
UC 522
NOTE 4

HOLD
TO FFI-5784
5D-A-029
NOTE 6

8 STACK DIAMETERS MINIMUM TO FLOW ELEMENT

2 STACK DIA. MIN.
NOTE 9
LAST FLOW DISTURBANCE

SKIRT ACCESS
2"
VBC106

9
VBC307S
1"
PIT 9795
PI 9795

PY 9715A
PY 9715B
TE 9797
TE 9796
FO
P/S
VE 9799A
VE 9799B
VSH 9799
VAH 9799
BY FAN VENDOR

K-574
NOTE 7
AIR HORNS NOTE 5
10

TT 9797
TI 9797
II 9724
IT 9724
SP ST
UC 577
OLC K574
UC 517
UC 518
OS K574

3/4"-C12C-5714-OAM
OAM
6D-A-037

IRREGULAR TRANSITION
39¼"CDCT 5718 VGH-3"P
(NOTE 2 & 7)
1½"

COMP. CO AI 58268 UC 522 NOTE 4
AI 5826 NOTE 3

NOTES:

1. AE-5826, AP-5826 ARE EXISTING INSTRUMENTS RELOCATED FROM STACK A-570 TO STACK A-571. SEE DWG. 5D-A-030 DEMO.
2. ATTACHMENT PIPING FOR VGH IS C12F AND FOR VGW IS P10C.
3. SEE COMPLEX LOOP DWG. No. C-512B FOR DCS SOFTWARE IMPLEMENTATION.
4. PREVENTS LIQUID WASTE FEED TO INCIN.
5. AIR HORN TO COOL K-574 BEARINGS.
6. SEE COMPLEX LOOP DWG. NO. C-535B FOR DCS SOFTWARE IMPLEMENTATION.
7. PROVIDE ACCOUSTIC INSULATION TO ID FAN HOUSING & INLET & OUTLET DUCTING.
8. DESIGN OF LADDER TO TOP VENT STACK PLATFORM TO ALLOW SUFFICIENT SPACING FROM HOT VENT STACK.
9. PROVIDE PERSONNEL PROTECTION ON THE STACK AT PLATFORM LOCATIONS.
10. SEE COMPLEX LOOP DWG. NO. C-505B1 FOR DCS SOFTWARE IMPLEMENTATION.

EQUIPMENT No.	K-574 (1)	A-571 (2)
PLANT ID.		
NAME:	CAT OX ID FAN	CAT OX STACK
DESCRIPTION P.O. No.:		
DWG. No.:		
MATERIAL:	CS	CS
SIZE:		5.5'x3.5'DIAx125'
CAPACITY:	32000 ACFM	
TEMP/PRESS:	52 INCHES WC	500°F/
HP/V/RPM:	450/4160/1800	
WEIGHT:		
VENDOR:		

NO.	DESCRIPTION	MOC \ TEAR	BY	APPR BY	DWG BY	DATE
9	REVISION PER MOC NO. 20080805	MBG	BXD	BXD	BXD	06/10
8	REVISION PER TEAR NO. 20070842	MBG	JLM	BXD	JLM	04/08
7	REVISION PER TEAR NO. 20050134	MBG	BXD	BXD	BXD	08/06

REVISIONS

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REFERENCE DRAWINGS

OCCIDENTAL CHEMICAL CORP.
OXYMAR VCM PLANT
INGLESIDE, TEXAS

FILENAME 5DA054.DGN

DRAWN BY
CHECKED BY
APPROVED BY

VCM EQUIPMENT LIST

ENGINEERING FLOW DIAGRAM
CAT OX ID FAN & STACK
CCIN-2

EWR NUMBER	AFE NUMBER	AREA DESIGNATION	TYPE	SIZE	DRAWING NUMBER	REVISION
				D	5D-A-054	9

RF=Y2KVCMPID.DGN 02/02/2000

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 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 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

Incinerator CCIN-2

Closure Plan and Cost Estimate

OxyChem
Ingleside, Texas

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Appendix A Supporting Information for Closure Cost Estimates

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 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 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 incinerator is also provided in the unit report (Attachment V.I.2). Under procedures detailed herein, OxyChem will close 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 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 Incinerator CCIN-2, which is subject to permitting standards. The unit is used to treat waste streams, which are classified as RCRA hazardous. Incinerator CCIN-2 is a 34 million Btu/hr unit with a maximum operating temperature of 2400 °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 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" 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 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:

- 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 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 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 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, 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, 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 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 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 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 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.

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 Incinerator 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 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 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 x 1.042 x 1.070 x 1.036 x 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
Incinerator CCIN-2	Volatile organics	SW-846, 8260

Table 2 Closure Schedule

Activity	Schedule (days)
Notify TCEQ of closure	45 (prior to start)
Closure activities begin – after prior 45 day notification	
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 Incinerator CCIN-2

Task	Cost
Flush and dispose of rinsate	$85,466
Incinerate 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 Incinerator CCIN-2

Activity		Cost
Flush Incinerator, Piping, and Pumps with Appropriate Solvent and Dispose of Rinsate		
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
Burn Natural Gas		
4 hours of labor and natural gas @ $100/hr		$400
	Subtotal	$400
Remove and Dispose of Ash, Scrubber Water, Absorber Effluents, and Spent Catalyst		
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
Decontaminate Equipment		
10 hours of labor @ $100/hr		$1,000
	Subtotal	$1,000
Laboratory Analysis		
2 samples @ $500/sample		$1,000
	Subtotal	$1,000
Engineer's Inspection and Certification		
24 hours of labor @ $200/hr		$4,800
	Subtotal	$4,800
	Subtotal	$140,560
	10% Contingency	$14,056
	TOTAL	$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 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[1]	Possible Methods of Disposal[1]
VCM CSA slab	Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes	Onsite via incineration of wastewater treatment and/or offsite
Tank C-720A slab	Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes	Onsite via incineration of wastewater treatment and/or offsite
Tank C-720B slab	Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes	Onsite via incineration of wastewater treatment and/or offsite
Tank C-720A	Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes	Onsite via incineration of wastewater treatment and/or offsite
Tank C-720B	Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes	Onsite via incineration of wastewater treatment and/or offsite
Tank C-720A ancillary equipment	Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes	Onsite via incineration of wastewater treatment and/or offsite
Tank C-720B ancillary equipment	Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes	Onsite via incineration of wastewater treatment and/or offsite
Incinerator CCIN-1	Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes	Onsite via incineration of wastewater treatment and/or offsite
Incinerator CCIN-2	Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes	Onsite via incineration of wastewater treatment and/or offsite

Equipment of HWM Unit	Possible Method of Decontamination[1]	Possible Methods of Disposal[1]
Incinerator CCIN-1 ancillary equipment	Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes	Onsite via incineration of wastewater treatment and/or offsite
Incinerator CCIN-1 ancillary equipment	Abrasive blasting, detergent rinsing, water rinsing, and/or chemical washes	Onsite via incineration of wastewater treatment and/or offsite

1. Applicants may list more than one appropriate method.

Table VII.B. – Unit Closure Cost Estimate

Task	Cost
VCM CSA	
Waste removal and disposal of drums	$120,390
Decontamination of slab	$10,319
Decontamination of cleanup equipment	$2,236
Sampling of surrounding soils & associated laboratory charges	$10,388
Engineering inspection/supervision	$2,064
Subtotal	$145,397
Contingency (10% minimum)	$14,540
Total Closure Cost	$159,937 (2024)

Task	Cost
Tank C-720A	
Waste removal and disposal of tank contents	$941,800
Decontamination of tank and disposal of rinsate	$94,360
Decontamination of cleanup equipment	$1,197
Sampling of surrounding soils & associated laboratory charges	$1,197
Engineering inspection/supervision	$5,746
Subtotal	$1,044,300
Contingency (10% minimum)	$104,430
Total Closure Cost	$1,148,730 (2024)

Task	Cost
Tank C-720B	
Waste removal and disposal of tank contents	$941,800
Decontamination of tank and disposal of rinsate	$94,360
Decontamination of cleanup equipment	$1,197
Sampling of surrounding soils & associated laboratory charges	$1,197
Engineering inspection/supervision	$5,746
Subtotal	$1,044,300
Contingency (10% minimum)	$104,4303
Total Closure Cost	$1,148,730 (2024)

Task	Cost
Secondary Containment for Tanks	
Stormwater removal and disposal	$135,869
Decontamination and disposal of rinsate	$30,957
Decontamination of cleanup equipment	$2,236
Sampling of surrounding soils & associated laboratory charges	$10,388
Engineering inspection/supervision	$2,064
Subtotal	$181,514
Contingency (10% minimum)	$18,151
Total Closure Cost	$199,665 (2024)

Task	Cost
Incinerator CCIN-1	
Flush and disposal of rinsate	$85,466
Incinerate natural gas	$479
Removal of ash/catalyst/etc. and disposal	$74,166
Decontamination of cleanup equipment	$1,197
Sampling & associated laboratory charges	$1,197
Engineering inspection/supervision	$5,746
Subtotal	$168,251
Contingency (10% minimum)	$16,825
Total Closure Cost	$185,076 (2024)

Task	Cost
Incinerator CCIN-2	
Flush and disposal of rinsate	$85,466
Incinerate natural gas	$479
Removal of ash/catalyst/etc. and disposal	$74,166
Decontamination of cleanup equipment	$1,197
Sampling & associated laboratory charges	$1,197
Engineering inspection/supervision	$5,746
Subtotal	$168,251
Contingency (10% minimum)	$16,825
Total Closure Cost	$185,076 (2024)

Total Permitted Facility Closure Cost (all unit costs combined)	$3,027,214 (2024)

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
Incinerator CCIN-1	$185,076
Incinerator CCIN-2	$185,076
Total Existing Unit Closure Cost Estimate[1] Year 2025	$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

1.0 Introduction 1
2.0 Unit and Waste Descriptions 2
3.0 Closure Plan 3
4.0 Notification of Closure Activities 4
5.0 Closure Certification 5
6.0 Permit Modification 6
7.0 Closure Schedule 7
8.0 Closure Cost Estimates 8

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 V.B.1, V.C.1, V.C.2, V.I.1, and V.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 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 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 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 this 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 V.B.1, V.C.1, V.C.2, V.I.1, and V.I.2.

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

August 11, 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 financial test financial assurance mechanism as set out in 30 TAC, Chapter 37, Subchapter C to meet OxyChem-Ingleside, TX'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,

Todd J. Behne
Plant Manager

HSBC

DATE OF AMENDMENT: 15OCT2024	CREDIT NUMBER: SDCMTN577726 ISSUED ON : 02OCT2020
BENEFICIARY: EXECUTIVE DIRECTOR TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, (REFER SBLC TEXT FOR FULL DETAILS)	APPLICANT: OCCIDENTAL CHEMICAL CORPORATION 14555 DALLAS PARKWAY, SUITE 400, DALLAS, TEXAS 75254
ADVISING BANK: . .	DC AMOUNT: USD 2,903,762.00 THIS AMENDMENT (NO. 008) FORMS AN INTEGRAL PART OF THE ABOVE MENTIONED STANDBY DOC CREDIT AND MUST BE ATTACHED THERETO.

INCREASE DC AMOUNT BY USD 101,985.00
TO A NEW AMOUNT OF USD 2,903,762.00
USD TWO MILLION NINE HUNDRED AND
THREE THOUSAND SEVEN HUNDRED SIXTY
TWO.00 ONLY

AMEND UNDERTAKING TERMS AND CONDITIONS AS FOLLOWS

FULL NAME AND ADDRESS OF THE BENEFICIARY:
.
EXECUTIVE DIRECTOR
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY,
ATTN: FINANCIAL ASSURANCE UNIT MC-184,
12100 PARK, 35 CIRCLE,
AUSTIN, TX 78753
.
WE HEREBY INCREASE THE AMOUNT OF OUR STANDBY LETTER OF CREDIT BY USD 101,985.00 FROM USD 2,801,777.00 TO A NEW SBLC AMOUNT USD 2,903,762.00 (UNITED STATES DOLLAR TWO MILLION NINE HUNDRED THREE THOUSAND SEVEN HUNDRED SIXTY TWO AND 00/100 ONLY)
.
ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED.
.
PLEASE NOTE THAT OUR ADDRESS HAS CHANGED. PLEASE SEND ALL CLAIMS AND CORRESPONDENCE AS PER THE TERMS AND CONDITIONS OF THE LETTER OF CREDIT TO THE FOLLOWING ADDRESS:

..... TO BE CONTINUED ON PAGE 2 .....

V008.01-1

HSBC Bank USA, N.A. Global Trade Solutions
VIVIEN CLARA C. VISCO (22029)
ANALYST, Global Trade Solutions

HSBC Bank USA, N.A. Global Trade Solutions
SONGYI HAN (23673)
TRADE MID OFFICE MANAGER, Global Trade Solutions

HSBC

GTS, TRANSACTION SERVICES,

ATTACHED TO AND FORMING PART OF DC NO. SDCMTN577726 PAGE 2

DATE OF ISSUE: 02OCT2020	BENEFICIARY: EXECUTIVE DIRECTOR TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, (REFER SBLC TEXT FOR FULL DETAILS)

.
HSBC BANK USA, N.A.,
GLOBAL TRADE SOLUTIONS (GTS) - TRANSACTION SERVICES,
HUDSON YARDS, THE SPIRAL,
66 HUDSON BLVD. EAST,
NEW YORK, NY 10001, U.S.A.
.
FOR ANY QUERIES, CONTACT OUR CLIENT SERVICES TEAM AT:
GTRF.USCS@US.HSBC.COM OR TELEPHONE NO. 1 866 327 0763
OR FAX NO. 1 718 488 4909
.

THIS AMENDMENT CONSISTS OF 2 PAGES

****

AUTHORIZED SIGNER

V008.01-1

HSBC Bank USA, N.A. Global Trade Solutions
VIVIEN CLARA C. VISCO (22029)
ANALYST, Global Trade Solutions

HSBC Bank USA, N.A. Global Trade Solutions
SONGYI HAN (23673)
TRADE MID OFFICE MANAGER, Global Trade Solutions

Occidental Petroleum Corporation

5 Greenway Plaza, Suite 110
Houston, Texas 77046-0521
Phone 713.599.4172

Michael Phillipus
Senior Director - Risk Management
Michael_Phillipus@oxy.com

VIA CERTIFIED MAIL 7019 0700 0000 9888 9990
RETURN RECEIPT REQUESTED

November 5, 2024

Texas Commission on Environmental Quailty
Financial Assurance Unit
Attn: Jacob Engelke
12100 Park 35 Circle, MC, 184
Austin, TX 78753

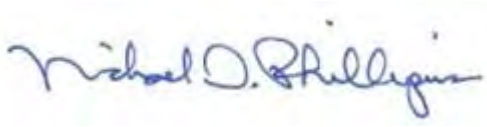
Re: Certificates of Liability Insurance for 2024 - 2025 – Texas Facilities
TXD 981 911 209, Deer Park, Texas (OxyVinyls, L.P.)
TXD 982 286 932, Ingleside Plant, Texas (Occidental Chemical Corporation)

Dear Mr. Engelke:

Enclosed for your records are Hazardous Waste Facility Certificates of Liability Insurance for the above referenced facilities.

If you have any questions concerning the documents enclosed with this letter, please contact me at 713-599-4172. Also, please help us maintain an accurate mailing list by returning correspondence containing required changes to names, titles, or address changes.

Very truly yours,



Michael Phillipus
Senior Director - Risk Management

cc: Kevin Spangler - Deer Park VCM
Ruben Herrera – Ingleside
Chris Krishna - Dallas
Amanda Soler

Docusign Envelope ID: 6226EFE4-486A-4289-8E0F-68054F29D958

30 TAC §37.641

CERTIFICATE FOR LIABILITY

1. This certificate certifies that the policy to which the certificate is attached provides liability insurance covering bodily injury and property damage in connection with the insured's obligation to demonstrate financial responsibility under 30 TAC §37.404 relating to Liability Requirements for Sudden Accidental Occurrences. The coverage applies at:

SWR No. 38000
Oxy Vinyls LP
Deer Park, TX Plant Site
5900 Highway 225, Gate 8A
Deer Park, TX 77536

SWR No. 38280
Occidental Chemical Corporation
Ingleside Plant
Highway 361
Gregory, TX 78359

For sudden accidental occurrences. The limits of liability are $1,000,000 "each occurrence" and $2,000,000 "annual aggregate" limits of the Insurer's liability, exclusive of legal defense costs.

2. The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions of the policy inconsistent with subsections (a) through (e) of this Paragraph are hereby amended to conform with subsections (a) through (e):

(a) Bankruptcy or insolvency of the insured shall not relieve the Insurer of its obligations under the policy to which this endorsement is attached.

(b) The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the insured for any such payment made by the Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in 30 TAC §37.541 (relating to Financial Test for Liability).

(c) Whenever requested by the TCEQ executive director, the Insurer agrees to furnish to the executive director a signed duplicate original of the policy and all endorsements.

(d) Cancellation of this endorsement, whether by the Insurer, the Insured, or a parent corporation providing insurance coverage for its subsidiary, or by a firm having an insurable interest in and obtaining liability insurance on behalf of the owner or operator of the facility, will be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the TCEQ executive director.

(e) Any other termination of this endorsement will be effective only upon written notice and only after the expiration of 30 days after a copy of such written notice is received by the TCEQ executive director.

Docusign Envelope ID: 6226EFE4-486A-4289-8E0F-68054F29D958

Attached to and forming part of policy No. GL7032455 issued by AIG Specialty Insurance Company, herein called the Insurer, of 70 Pine Street, New York, NY 10270 to Oxy Vinyls LP of 5 Greenway Plaza, Suite 110, Houston, TX 77046 and Occidental Chemical Corporation, Ingleside Plant, Highway 361, Gregory, TX 78359 this 1st day of November 2024. The effective date of said policy is November 1, 2024.

I hereby certify that the wording of this endorsement is identical to the wording specified in 30 TAC §37.641 as such regulation was constituted on the date first above written, and that the Insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in Texas.

(Signature of Authorized Representative of Insurer)

Signed by:
Paul Santos
D481F6152949423...

(Date) 11/1/2024

(Type Name) Paul Santos
(Title) Attorney in Fact

Authorized Representative of (name of Insurer)
AIG Specialty Insurance Company

(Address of Representative)
175 Water Street, 27th Floor, New York, NY 10038

Attachment IX.

Releases from Solid Waste Units and Corrective Action

Attachment IX

Solid Waste Management Units

OxyChem
Ingleside, Texas

Table of Contents

1.0 Background 1
2.0 Facility Units 2
3.0 Ongoing Corrective Action 3

Attachments

Attachment A Notice of Registration – April 9, 2025

1.0 Background

The original application for Permit No. HW-50322 was submitted around 1990 to authorize the operation of 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, 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
April 9, 2025

***** TEXAS COMMISSION ON ENVIRONMENTAL QUALITY *****
Notice of Registration
Industrial and Hazardous Waste

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
INGLESIDE, TX 78362-0710

Region: 14
County: 205 SAN PATRICIO
Land Type: Private
Title: EVIRONMENTAL
Site Street Address: 4133 HWY 361
GREGORY, TX 78359

Initial Registration Date: 12/11/1987
Last Amendment Date: 04/08/2025
Last Date NOR Computer update: 04/08/2025
Phone: 361-776-6395

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 04/08/2025 - The next unassigned sequence number for WASTES is 9451 and
The next unassigned sequence number for UNITS is 134

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

****** WASTE INFORMATION ******

Texas Waste Code	Waste Class	Status	Date of Status	Managed Onsite/ Offsite	Radio-active	TCEQ Audit Complete

******** Active Wastes ********

0016202H H Active 04/08/2025 On & Off No No

Description from Generator: Oxy Vinyls La Porte Chlorinated By-product
Texas Form Code: 202 Halogenated (e.g., chlorinated) solvent
EPA Form Code: W219 Other organic liquid
Origin Code: 4 Received from off-site and was not recycled or treated on-site
Source Code: G24 Solvent or product distillation recovery (sludge, waste)
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0016
EPA Hazardous Waste Numbers: D001 K019 K020
Current Management Units: Container storage area 022
Incinerator 065 066
Tank (surface) 023 082

00700011 1 Active 04/08/2025 Off-site No No

Description from Generator: Lab packs (NH) resulting from disposal of laboratory chemicals; 12/93
Texas Form Code: 001 Lab packs of old chemicals only
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0070
Current Management Units: None

0075001H H Active 04/08/2025 Off-site No No

Description from Generator: Lab packs (H) resulting from disposal of lab chemicals; 12/93
Texas Form Code: 001 Lab packs of old chemicals only
EPA Form Code: W001 Lab packs with no acute hazardous waste
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G22 Laboratory analytical wastes (used chemicals)
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0075
EPA Hazardous Waste Numbers: D002 D009
Current Management Units: None

01003902 2 Active 04/08/2025 On & Off No No

Description from Generator: Debris from firebox/furnace repair - fire brick, insulation, soil wooden pallets, etc.; 10/93
Texas Form Code: 390 Nonhazardous concrete/cement/construction debris
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0100
Current Management Units: 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 04/08/2025 On & Off No No

Description from Generator: Plant trash from offices and plant production. Includes paper, glass, scrapmetal, plastic, wood, empty containers.
Texas Form Code: 999 Class 2 plant trash
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0102
Current Management Units: Container storage area 103
Miscellaneous storage containers 071

01049022 2 Active 04/08/2025 On & Off No No

Description from Generator: Supplemental plant production refuse from manufacture of chlorine, caustic soda,ethylene dichloride. This includes metal parts, floor sweepings, and scrap materials. Initial generation 1987.
Texas Form Code: 902 Class 2 supplemental plant production refuse
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0104
Current Management Units: Container storage area 103
Miscellaneous storage containers 071

0106489H H Active 04/08/2025 On & Off No No

Description from Generator: Clean up of fuel / lubrication oil spills, leaks, and drips
Texas Form Code: 489 Petroleum contaminated solids
EPA Form Code: W409 Other organic solids
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G09 Other production or service-related processes
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0106
EPA Hazardous Waste Numbers: D040
Current Management Units: Container storage area 022 067
Miscellaneous storage containers 125

01073101 1 Active 04/08/2025 On & Off No No

Description from Generator: Clean up of oil and fuel spills. Estimated initial date of generation 1988.
Texas Form Code: 310 Spent solid filters or adsorbents
Origin Code: 2 Result of spill clean-up, equipment decommissioning or emergency removal
Company's Internal Code(s): CC0107
Current Management Units: Container storage area 103 101
Miscellaneous storage containers 125 072 128 035

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 ******

0108407H H Active 04/08/2025 On & Off No No

Description from Generator: Solvent contaminated material generated from maintenance activities.
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: G09 Other production or service-related processes
NAICS Code: 325181 Alkalies and Chlorine Manufacturing
Company's Internal Code(s): CC0108
EPA Hazardous Waste Numbers: D040 F001 F003
Current Management Units: Container storage area 022

01101141 1 Active 04/08/2025 Off-site No No

Description from Generator: Co-generation wastewater stream
Texas Form Code: 114 Other aqueous waste with low dissolved solids
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0110
Current Management Units: Miscellaneous storage containers 072
Sump 092 091
Tank 093 094

01134092 2 Active 04/08/2025 On-site No No

Description from Generator: Waste is generated during the disassembly/demolition or the construction of onsite cooling towers.
Texas Form Code: 409 Other non-halogenated organic solids
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0113
Current Management Units: Container storage area 105
Miscellaneous storage containers 072

01143191 1 Active 04/08/2025 On & Off No No

Description from Generator: Cooling tower repairs. Initial generation 1988.
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): CC0114
Current Management Units: 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 04/08/2025 On & Off No No

Description from Generator: Spent paint thinner is generated during plant maintenance activities. Initial generation is estimated in 1988.
Texas Form Code: 211 Paint thinner or petroleum distillates
EPA Form Code: W211 Paint thinner or petroleum distillates
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G06 Painting and coating
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0117
EPA Hazardous Waste Numbers: D001 D035 F003 F005
Current Management Units: Container storage area 022 113
Distillation/Solvent recovery unit 095
Miscellaneous storage containers 125

01184091 1 Active 04/08/2025 On & Off No No

Description from Generator: Waste Permanite Powder from maintenance activities.
Texas Form Code: 409 Other non-halogenated organic solids
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0118
Current Management Units: Container storage area 103
Miscellaneous storage containers 072

0121319H H Active 04/08/2025 On-site No No

Description from Generator: Broken lamps generated during replacement and maintenance of lights.
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: G09 Other production or service-related processes
NAICS Code: 324110 Petroleum Refineries
Company's Internal Code(s): CC0121
EPA Hazardous Waste Numbers: D009
Current Management Units: Container storage area 022 113 067
Miscellaneous storage containers 125

01323192 2 Active 04/08/2025 On & Off No No

Description from Generator: Bead blaster material is generated from the cleaning of the maintenance beadblaster machine which cleans parts.
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): CC0132
Current Management Units: 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 ******

0133409H H Active 04/08/2025 On & Off No No

Description from Generator: Paint-related material generated when paint or paint thinner dries in pails; 1988
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): CC0133
EPA Hazardous Waste Numbers: D001 F003 F005
Current Management Units: Container storage area 022 113
Miscellaneous storage containers 125

0134203H H Active 04/08/2025 Off-site No No

Description from Generator: Naptha used to clean mechanical parts; 1988
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): CC0134
EPA Hazardous Waste Numbers: D001 D018 D029 D039 D040
Current Management Units: None

0135117H H Active 04/08/2025 On & Off No No

Description from Generator: Waste Mercury from clean-up of mercury spills and disposal of mercury-containingequipment.
Texas Form Code: 117 Waste liquid mercury
EPA Form Code: W117 Waste liquid mercury
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: 325181 Alkalies and Chlorine Manufacturing
Company's Internal Code(s): CC0135
EPA Hazardous Waste Numbers: D009
Current Management Units: Container storage area 113 022

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 ******

0136206H H Active 04/08/2025 Off-site No No

Description from Generator: Waste oil generated during maintanence 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 D028 D040 F001 F002
Current Management Units: Container storage area 113 067 022
Incinerator 066 065
Miscellaneous storage containers 125

01372962 2 Active 04/08/2025 On & Off No No

Description from Generator: 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 04/08/2025 On & Off No No

Description from Generator: 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 04/08/2025 On & Off No No

Description from Generator: 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

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 ******

0140209H H Active 04/08/2025 On & Off No No

Description from Generator: Unused varnish used as coating on insulation work.
Texas Form Code: 209 Organic paint, ink, lacquer, or varnish
EPA Form Code: W209 Paint, ink, lacquer, or varnish
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G09 Other production or service-related processes
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0140
EPA Hazardous Waste Numbers: D001
Current Management Units: Container storage area 022

01412101 1 Active 04/08/2025 On & Off No No

Description from Generator: Unused epoxy/adhesive that was not used during maintenance, and is no longer needed, and it is out of spec.
Texas Form Code: 210 Adhesives or epoxies
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0141
Current Management Units: Container storage area 103
Miscellaneous storage containers 072

01423191 1 Active 04/08/2025 On-site No No

Description from Generator: Waste fireproofing from maintenance activities
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): CC0142
Current Management Units: Container storage area 103
Miscellaneous storage containers 072

01501021 1 Active 04/08/2025 On-site No No

Description from Generator: 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 limits.
Texas Form Code: 102 Aqueous waste with low other toxic organics
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0150
Current Management Units: Miscellaneous storage containers 072
Sump 016 015 062
Tank (surface) 059 045 036 037 038 039 040 041 042 043 060 061 044 049 032 046 047 017 031

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 04/08/2025 On-site No No

Description from Generator: Rust/scale that is removed from decontaminated process equipment
Texas Form Code: 307 Metal scale, filings or scrap
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0151
Current Management Units: Container storage area 067 084
Miscellaneous storage containers 035

0152319H H Active 04/08/2025 On-site No No

Description from Generator: Spent sandblasting media used to clean process equipment and vessels.
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: G19 Other one-time or intermittent processes
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0152
EPA Hazardous Waste Numbers: D008
Current Management Units: Container storage area 067

01604881 1 Active 04/08/2025 On-site No No

Description from Generator: Spent railroad ties are generated when wooden railroad ties are removed from service and can no longer be used.
Texas Form Code: 488 Wood debris
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC 0160
Current Management Units: Miscellaneous storage containers 072

01734902 2 Active 04/08/2025 On & Off No No

Description from Generator: Sandblasting sand used in daily maintenance activities throughout the plant. Initial date of generation was 06/87.
Texas Form Code: 490 Sand blasting waste
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0173
Current Management Units: Container storage area 107 067 127 103
Miscellaneous storage containers 083 072

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 ******

01743902 2 Active 04/08/2025 On & Off No No

Description from Generator: Miscellaneous construction debris generated from improvements and/or repairs toareas throught the plant. Initial date of generation was 06/90.
Texas Form Code: 390 Nonhazardous concrete/cement/construction debris
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0174
Current Management Units: Container storage area 103
Miscellaneous storage containers 072 080

01764891 1 Active 04/08/2025 On & Off No No

Description from Generator: Soil generated from the clean-up of a diesel spill from plant machinery. Initial date of generation was 8/94.
Texas Form Code: 489 Petroleum contaminated solids
Origin Code: 2 Result of spill clean-up, equipment decommissioning or emergency removal
Company's Internal Code(s): CC0176
Current Management Units: Container storage area 103
Miscellaneous storage containers 128 072

0177205H H Active 04/08/2025 On & Off No No

Description from Generator: Fuel oil contaminated water from flushing out process lines orequipment.
Texas Form Code: 205 Oil-water emulsion or mixture
EPA Form Code: W205 Oil-water emulsion or mixture
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): CC0177
EPA Hazardous Waste Numbers: D001 D018
Current Management Units: Container storage area 022

01780092 2 Active 04/08/2025 On & Off No No

Description from Generator: Medical waste generated by daily activities at the Medical Department. Date ofinitial generation was 12/89.
Texas Form Code: 009 Other lab packs
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0178
Current Management Units: Miscellaneous storage containers 074 072

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 ******

01792061 1 Active 04/08/2025 On-site No No

Description from Generator: Used oil generated from equipment oil change outs.
Texas Form Code: 206 Waste oil
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0179
Current Management Units: Container storage area 112 103
Miscellaneous storage containers 072 128

0180309H H Active 04/08/2025 On & Off No No

Description from Generator: Battery changeout
Texas Form Code: 309 Batteries or battery parts, casings, cores
EPA Form Code: W309 Batteries, battery parts, cores, casings
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): CC0180
EPA Hazardous Waste Numbers: D004 D008
Current Management Units: Container storage area 113 022

01843101 1 Active 04/08/2025 On & Off No No

Description from Generator: Used oil filters
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): CC0184
Current Management Units: Container storage area 103
Miscellaneous storage containers 128 125 072

01853192 2 Active 04/08/2025 On & Off No No

Description from Generator: Drained, non-PCB electrical equipment (capacitors and transformers)
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): CC0185
Current Management Units: 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 ******

01863191 1 Active 04/08/2025 On & Off No No

Description from Generator: Drained, oil-containing equipment removed from service. Oil is drained from equipment.
Texas Form Code: 319 Other waste inorganic solids
Origin Code: 2 Result of spill clean-up, equipment decommissioning or emergency removal
Company's Internal Code(s): CC0186
Current Management Units: Container storage area 103
Miscellaneous storage containers 072 035

01873192 2 Active 04/08/2025 On & Off No No

Description from Generator: Activated alumina used as a desiccant throughout the plant. White ball form.
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): CC0187
Current Management Units: Container storage area 103
Miscellaneous storage containers 072

01884061 1 Active 04/08/2025 On-site No No

Description from Generator: RCRA empty containers - drums, totes, etc. from industrial water treatment chemicals and oil.
Texas Form Code: 406 Empty fiber or plastic containers
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0188
Current Management Units: Container storage area 067 070 104 087
Miscellaneous storage containers 072

0190404H H Active 04/08/2025 On & Off No No

Description from Generator: spent carbon canisters from aerosol can puncturing devices
Texas Form Code: 404 Spent carbon
EPA Form Code: W310 Filters, solid adsorbents, ion exchange resins and spent carbon
Origin Code: 5 Residual from on-site treatment, disposal or recycling of hazardous waste
Source Code: G21 Air pollution control devices (baghouse dust, etc.)
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0190
EPA Hazardous Waste Numbers: D040
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 ******

01914891 1 Active 04/08/2025 On & Off No No

Description from Generator: HARDENED ASPHALT
Texas Form Code: 489 Petroleum contaminated solids
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0191
Current Management Units: Container storage area 103
Miscellaneous storage containers 072

0192204H H Active 04/08/2025 On & Off No No

Description from Generator: Residue from spray cans that have been punctured.
Texas Form Code: 204 Halogenated/non-halogenated solvent mixture
EPA Form Code: W204 Concentrated halogenated/ non-halogenated solvent mixture
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): CC0192
EPA Hazardous Waste Numbers: D001 D035 D040
Current Management Units: Container storage area 022

01933192 2 Active 04/08/2025 On & Off No No

Description from Generator: uncontaminated fire brick material from periodic maintenance or turnaroundactivities
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): CC0193
Current Management Units: Container storage area 103
Miscellaneous storage containers 072 035

01943192 2 Active 04/08/2025 On & Off No No

Description from Generator: Uncontaminated plastic packing removed during periodic maintenance orturnaround activities
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): CC0194
Current Management Units: Container storage area 103
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 ******

01953192 2 Active 04/08/2025 On & Off No No

Description from Generator: Uncontaminated fiberglass plastic (FRP) material generated from maintenanceor turnaround activities
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): CC0195
Current Management Units: Container storage area 103
Miscellaneous storage containers 072 035

0196409H H Active 04/08/2025 On & Off No No

Description from Generator: WASTE RESIN GENERATED DURING MAINTENANCE ACTIVITIES
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: G09 Other production or service-related processes
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0196
EPA Hazardous Waste Numbers: D001 F003
Current Management Units: Container storage area 022

0197488H H Active 04/08/2025 On & Off No No

Description from Generator: CONTAMINATED COOLING TOWER WOOD GENERATED FROM REPAIRS TO PLANTCOOLING TOWERS
Texas Form Code: 488 Wood debris
EPA Form Code: W409 Other organic solids
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G09 Other production or service-related processes
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0197
EPA Hazardous Waste Numbers: D004
Current Management Units: Miscellaneous storage containers 035

01983192 2 Active 04/08/2025 On & Off No No

Description from Generator: Ceramic packing removed during periodic maintenance or turnaround activities.
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): CC0198
Current Management Units: Container storage area 103
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 04/08/2025 On & Off No No

Description from Generator: waste fireproofing material
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): CC0200
Current Management Units: Container storage area 103 085
Miscellaneous storage containers 072 035

0202211H H Active 04/08/2025 On & Off No No

Description from Generator: Waste Gasoline
Texas Form Code: 211 Paint thinner or petroleum distillates
EPA Form Code: W211 Paint thinner or petroleum distillates
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): CC0202
EPA Hazardous Waste Numbers: D001 D018
Current Management Units: Container storage area 022 113
Miscellaneous storage containers 125

0203211H H Active 04/08/2025 On & Off No No

Description from Generator: Spill of curing agent.
Texas Form Code: 211 Paint thinner or petroleum distillates
EPA Form Code: W211 Paint thinner or petroleum distillates
Origin Code: 2 Result of spill clean-up, equipment decommissioning or emergency removal
Source Code: G19 Other one-time or intermittent processes
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0203
EPA Hazardous Waste Numbers: D001
Current Management Units: Container storage area 067 022

02043012 2 Active 04/08/2025 On-site No No

Description from Generator: Spill materials from release of corrosion inhibitor to ground.
Texas Form Code: 301 Soil contaminated with organics
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0204
Current Management Units: 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 04/08/2025 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 04/08/2025 On & Off No No

Description from Generator: Heavy Ends tank cleaning residue combined with reboiler / exchanger scale.
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: G09 Other production or service-related processes
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0226
EPA Hazardous Waste Numbers: D001 D007 D019 D022 D028 D032 D040 K019 K020
Current Management Units: Container storage area 022 067 113 087 084

02274912 2 Active 04/08/2025 On & Off No No

Description from Generator: 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
Texas Form Code: 491 Dewatered biological treatment sludge
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0227
Current Management Units: Container storage area 115 084 107 087
Miscellaneous storage containers 072

0228491H H Active 04/08/2025 On & Off No No

Description from Generator: Dewatered biological treatment sludge (biomass) is generated from the waterwatertreatment 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.
Texas Form Code: 491 Dewatered biological treatment sludge
EPA Form Code: W409 Other organic 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): CC0228
EPA Hazardous Waste Numbers: F001 F003 F005 F025 K019 K020
Current Management Units: Container storage area 115 106 113 087
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 ******

0229407H H Active 04/08/2025 On & Off No No

Description from Generator: Reboiler scale produced when carbon builds up on the walls of the reboiler tubes.
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): CC0229
EPA Hazardous Waste Numbers: D007 D019 D022 D028 D032 D040
Current Management Units: Container storage area 067 113 084 022
Sump 069

02374031 1 Active 04/08/2025 On & Off No No

Description from Generator: Steam Stripper Packing
Texas Form Code: 403 Solids resins or polymerized organics
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0237
Current Management Units: Container storage area 115 073 087 084
Miscellaneous storage containers 072

0238319H H Active 04/08/2025 On & Off No No

Description from Generator: Ethylene dichloride (EDC) contaminated material generated during production & maintenance operations.
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: G19 Other one-time or intermittent processes
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0238
EPA Hazardous Waste Numbers: D028 F024
Current Management Units: Container storage area 106 022 067 113 084 087 073

0239407H H Active 04/08/2025 On-site No No

Description from Generator: Reboiler scale and VCM furnace coke mixture.
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): CC0239
EPA Hazardous Waste Numbers: D006 D007 D019 D022 D028 D032 D040 D043
Current Management Units: Container storage area 084 067

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 04/08/2025 On & Off No No

Description from Generator: VCM process area trench material (non-hazardous)
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): CC0240
Current Management Units: Container storage area 115 106 067 068 084 073 113 087 089 107 109 114
Miscellaneous storage containers 072

0241301H H Active 04/08/2025 On & Off No No

Description from Generator: Solvent contaminated media (typically soil) is generated during spill clean-up and/or general plant cleanup in the EDC/VCM units.
Texas Form Code: 301 Soil contaminated with organics
EPA Form Code: W301 Contaminated Soil
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): CC0241
EPA Hazardous Waste Numbers: D028 D043 K019 K020 U043 U077
Current Management Units: Container storage area 022 070 068 067

0242303H H Active 04/08/2025 On & Off No No

Description from Generator: Incinerator firebox solids from VCM Incinerators F-550 AND F-570.
Texas Form Code: 303 Ash, slag or other residue from incineration of waste
EPA Form Code: W303 Ash
Origin Code: 5 Residual from on-site treatment, disposal or recycling of hazardous waste
Source Code: G19 Other one-time or intermittent processes
NAICS Code: 325181 Alkalies and Chlorine Manufacturing
Company's Internal Code(s): CC0242
EPA Hazardous Waste Numbers: F001 F003 F005 F025 K019 K020
Current Management Units: Container storage area 022 113 084

0243319H H Active 04/08/2025 On & Off No No

Description from Generator: Incinerator brick generated when VCM unit incinerators are cleaned out or rebricked.
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: G09 Other production or service-related processes
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0243
EPA Hazardous Waste Numbers: F001 F003 F005 F025 K019 K020
Current Management Units: Container storage area 022 109 089

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 ******

0244407H H Active 04/08/2025 On & Off No No

Description from Generator: VCM Furnace Coke - carbon residue; 12/91
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): CC0244
EPA Hazardous Waste Numbers: D001 D006 D007 D028 D043
Current Management Units: Container storage area 022 113 067

02453931 1 Active 04/08/2025 On & Off No No

Description from Generator: Unused and spent copper chloride catalyst is generated during periodic catalystchange-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.
Texas Form Code: 393 Catalyst waste
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0245
Current Management Units: Container storage area 106 103 067 087 068 073 084
Miscellaneous storage containers 072

0246393H H Active 04/08/2025 On & Off No No

Description from Generator: spent copper chloride catalyst generatedduring periodic reactor clean-outs.plastic, trash, ppe may be included.
Texas Form Code: 393 Catalyst waste
EPA Form Code: W319 Other inorganic solids
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G08 Removal of spent process liquids or catalysts
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0246
EPA Hazardous Waste Numbers: D028
Current Management Units: Container storage area 106 022 067 113 073 084 087 068

0247319H H Active 04/08/2025 On & Off No No

Description from Generator: VCM process area contaminated trench material/sludge
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: G32 Cleanup of spill residues
NAICS Code: 325181 Alkalies and Chlorine Manufacturing
Company's Internal Code(s): CC0247
EPA Hazardous Waste Numbers: D028 D043 K019 K020 U077
Current Management Units: Container storage area 022 073 113 087 084

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 ******

0248219H H Active 04/08/2025 On & Off No No

Description from Generator: 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 D007 D019 D021 D022 D027 D028 D029 D032 D033 D034 D036 D039 D040 K019 K020
Current Management Units: Container storage area 022; Incinerator 065 066; Tank (surface) 023 082

0249310H H Active 04/08/2025 On & Off No No

Description from Generator: 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
Current Management Units: Container storage area 022

0250404H H Active 04/08/2025 On & Off No No

Description from Generator: 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
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 ******

0251219H H Active 04/08/2025 On & Off No No

Description from Generator: VCM Light Ends are generated at the VCM Unit during the purification process. Estimated initial generation date 4Q91.
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): CC0251
EPA Hazardous Waste Numbers: D001 D018 D019 D022 D028 D029 D040 F025
Current Management Units: Incinerator 065 066
Tank (surface) 023 082

02523192 2 Active 04/08/2025 On & Off No No

Description from Generator: 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%.
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): CC0252
Current Management Units: Container storage area 103 068
Miscellaneous storage containers 072

0253306H H Active 04/08/2025 On & Off No No

Description from Generator: Limestone sludge is generated during neutralization of HC1 generated during incinceration 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.
Texas Form Code: 306 "Dry" lime or metal hydroxide solids not "fixed"
EPA Form Code: W501 Lime and/or metal hydroxide sludges and solids with no cyanides
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): CC0253
EPA Hazardous Waste Numbers: F001 F003 F005 F025 K019 K020
Current Management Units: Container storage area 087 106 113
Tank (surface) 055 057 058 054 053 050 056

02543061 1 Active 04/08/2025 On & Off No No

Description from Generator: Limestone sludge is generated during neutralization of HCl generated during incineration of chlorinated organics. The m
Texas Form Code: 306 "Dry" lime or metal hydroxide solids not "fixed"
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0254
Current Management Units: Container storage area 068 084 106 087
Miscellaneous storage containers 035 072
Tank (surface) 056 057 055 054 053 050 058

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 ******

0255319H H Active 04/08/2025 On & Off No No

Description from Generator: Rockbox residue generated during clean-out and other maintenance activities required at limestone neutralization equipment (rockbox) in VCM unit. 10/93
Texas Form Code: 319 Other waste inorganic solids
EPA Form Code: W319 Other inorganic solids
Origin Code: 5 Residual from on-site treatment, disposal or recycling of hazardous waste
Source Code: G19 Other one-time or intermittent processes
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0255
EPA Hazardous Waste Numbers: F001 F003 F005 F025 K019 K020
Current Management Units: Container storage area 068 106 087 073 084
Tank (surface) 050

02563191 1 Active 04/08/2025 On & Off No No

Description from Generator: Rockbox residue generated during lean-out and other maintenance activities required at limestone neutralization equipmen
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): CC0256
Current Management Units: Container storage area 068 084 073 106 087
Miscellaneous storage containers 035 072
Tank (surface) 050

02573062 2 Active 04/08/2025 On & Off No No

Description from Generator: Limestone sludge is generated during neutralization of Hcl generated during incineration of chlorinated organics
Texas Form Code: 306 "Dry" lime or metal hydroxide solids not "fixed"
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0257
Current Management Units: Container storage area 087 106 115 107
Miscellaneous storage containers 035 072
Tank (surface) 056 058 055 054 053 050 057

0258219H H Active 04/08/2025 On & Off No No

Description from Generator: Mother Liquor from direct chlorination reactor in the VCM unit.
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): CC0258
EPA Hazardous Waste Numbers: D001 K019 K020
Current Management Units: Container storage area 022 089 068

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 ******

02593192 2 Active 04/08/2025 On & Off No No

Description from Generator: Rockbox residue generated during clean out and other maintenance activities required at limestone neutralization equipment.
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): CC0259
Current Management Units:

Container storage area	106 115 087 107 068 073 084
Miscellaneous storage containers	035 072
Tank (surface)	050
Waste pile	129

0260310H H Active 04/08/2025 On & Off No No

Description from Generator: Absorbent material, plastic and personal protective equipment ; 10/93
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): CC0260
EPA Hazardous Waste Numbers: F001 F003 F005 F025 K019 K020
Current Management Units:

Container storage area	022

0261319H H Active 04/08/2025 On-site No No

Description from Generator: Mother Liquor Contaminated Solids. Waste is generated during cleanout of the Mother Liquor (EDC) tank. Waste consists of iron (ferric chloride) contaminated with EDC.
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: G14 Removal of tank sludge, sediments or slag
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0261
EPA Hazardous Waste Numbers: D028
Current Management Units:

Container storage area	113 022

0267407H H Active 04/08/2025 On-site No No

Description from Generator: Incinerator Absorber Solids are generated during maintenance or clean-out of incinerator acid absorber system.
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): CC0267
EPA Hazardous Waste Numbers: F001 F003 F005 F025 K019 K020
Current Management Units:

Container storage area	084 113 107
Miscellaneous storage containers	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 ******

0268409H H Active 04/08/2025 On-site No No

Description from Generator: 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 04/08/2025 On & Off No No

Description from Generator: Spent activated carbon drums generated during maintenance activities. Drums areused as back-up devices in vacuuming activities. Materials vacuumed are steamcleaned 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 103 068
Miscellaneous storage containers 072

02713192 2 Active 04/08/2025 On & Off No No

Description from Generator: Air dryer dessicant from VCM air compressor generated when it becomes spent & replaced with new dessicant. 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 04/08/2025 On & Off No No

Description from Generator: 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 022 113 067

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 04/08/2025 On & Off No No

Description from Generator: Dewatered sludge generated from the clean-out of the EDC stormwater tank locatedin the VCM plant. The sludge was generated on 09/30/94.
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: G14 Removal of tank sludge, sediments or slag
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0275
EPA Hazardous Waste Numbers: F001 F003 F005 F025 K019 K020
Current Management Units: Container storage area 115 106 087 073 084 067

0276407H H Active 04/08/2025 On-site No No

Description from Generator: Dewatered solids generated from the cleanout of wastewater tanks and piping.
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: G14 Removal of tank sludge, sediments or slag
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0276
EPA Hazardous Waste Numbers: F001 F003 F005 F025 K019 K020
Current Management Units: Container storage area 113 107

0277310H H Active 04/08/2025 On-site No No

Description from Generator: Spent Alumina Desiccant - alumina is used to remove moisture and iron from product VCM in C-702.
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): CC0277
EPA Hazardous Waste Numbers: F025
Current Management Units: Container storage area 113 087

0289303H H Active 04/08/2025 On & Off No No

Description from Generator: Scale from incinerator flue gas caustic wash train. Initial date of generation was 9/19/1996.
Texas Form Code: 303 Ash, slag or other residue from incineration of waste
EPA Form Code: W303 Ash
Origin Code: 5 Residual from on-site treatment, disposal or recycling of hazardous waste
Source Code: G25 Hazardous waste managment
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0289
EPA Hazardous Waste Numbers: F001 F003 F005 F025 K019 K020
Current Management Units: Container storage area 113 022

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 ******

02903902 2 Active 04/08/2025 On & Off No No

Description from Generator: nonhaz. construction debris includes concrete,rebar,plywood,soil,plasticinsulation(non-asbestos),steel(pipe,etc)
Texas Form Code: 390 Nonhazardous concrete/cement/construction debris
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0290
Current Management Units: Container storage area 103 073
Miscellaneous storage containers 072

0292404H H Active 04/08/2025 On & Off No No

Description from Generator: Spent activated carbon used to remove organics from EDC/VCM wastewater.
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: G23 Wastewater treatment (sludge, filter cake, etc.)
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0292
EPA Hazardous Waste Numbers: F001 F003 F005 F025 K019 K020
Current Management Units: Container storage area 106 073 068 113 087 107
Miscellaneous storage containers 035

0293105H H Active 04/08/2025 On-site No No

Description from Generator: Hazardous wastewater at VCM; low pH water due to HCl in stream from incinerators.
Texas Form Code: 105 Acidic aqueous waste
EPA Form Code: W105 Acidic aqueous wastes less than 5% acid
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G09 Other production or service-related processes
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0293
EPA Hazardous Waste Numbers: D002 F001 F003 F005 F025 K019 K020
Current Management Units: Incinerator 066 065
Sump 063 064
Tank (surface) 054 053 050

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 04/08/2025 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 106 073 068 113 087 107
Miscellaneous storage containers 035

0295319H H Active 04/08/2025 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

02962111 1 Active 04/08/2025 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 070 113 103
Miscellaneous storage containers 072
Tank (surface) 059

02973022 2 Active 04/08/2025 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

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 ******

0298393H H Active 04/08/2025 On & Off No No

Description from Generator: Spent Catalytic Oxidizer catalyst generated at the VCM Incinerators F-550 and F-570.
Texas Form Code: 393 Catalyst waste
EPA Form Code: W319 Other inorganic solids
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G08 Removal of spent process liquids or catalysts
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC-0298
EPA Hazardous Waste Numbers: F001 F003 F005 F025 K019 K020
Current Management Units: Container storage area 084 022

0301301H H Active 04/08/2025 On & Off No No

Description from Generator: By-Prod contaminated materials includingdirt, rock, cement and debris
Texas Form Code: 301 Soil contaminated with organics
EPA Form Code: W301 Contaminated Soil
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): CC0301
EPA Hazardous Waste Numbers: K019
Current Management Units: Container storage area 022

0302319H H Active 04/08/2025 Off-site No No

Description from Generator: Solids from EDC process and wastewater tank cleanouts
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: G13 Cleaning out process equipment
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0302
EPA Hazardous Waste Numbers: K019
Current Management Units: None

0304319H H Active 04/08/2025 On-site No No

Description from Generator: Rockbox Tank Debris and Solids generated during demolition of tank
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: G19 Other one-time or intermittent processes
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0304
EPA Hazardous Waste Numbers: F001 F003 F005 F025 K019 K020
Current Management Units: Container storage area 087

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 ******

0339219H H Active 04/08/2025 On & Off No No

Description from Generator: 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 considered a waste. The plant that receives this stream uses the material as an ingredient (w/o prior reclamation)in its industrial; Due to waste minimization, ingredient changes or process changes this waste is no
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): CC0339
EPA Hazardous Waste Numbers: D001 D002 D021 D022 D027 D028 D034 D036 D039 D040 K019
Current Management Units: Incinerator 066 065

04001131 1 Active 04/08/2025 On-site No No

Description from Generator: C/A wastewater from the chlorine-causticprocess areas and stormwater. Estimatedinitial generation 1988.
Texas Form Code: 113 Other aqueous waste with high dissolved solids
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0400
Current Management Units: Drip pad 117
Miscellaneous storage containers 072
Sump 008 010 003 011 099 013 098
Surface impoundment 007

04013901 1 Active 04/08/2025 On & Off No No

Description from Generator: Demo debris, bricks, dirt, cement from demolition of pads and trenches inprocess areas.
Texas Form Code: 390 Nonhazardous concrete/cement/construction debris
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0401
Current Management Units: Container storage area 103
Miscellaneous storage containers 072

04023062 2 Active 04/08/2025 On & Off No No

Description from Generator: 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. The precipitates are removed in a clarification system. The removed material is "brine sludge." Estimated date of initial generation 1988.
Texas Form Code: 306 "Dry" lime or metal hydroxide solids not "fixed"
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0402
Current Management Units: Container storage area 070 090 105
Miscellaneous storage containers 072 035
Sump 009

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 ******

04033111 1 Active 04/08/2025 On & Off No No

Description from Generator: Asbestos and asbestos contaminated material
Texas Form Code: 311 Asbestos solids and debris
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0403
Current Management Units: Container storage area 116 103
Drip pad 117
Miscellaneous storage containers 035 072

0404110H H Active 04/08/2025 On-site No No

Description from Generator: Sulfate purge wastewater from caustic area to neutralization sump. Stream maybe hazardous due to pH above 12.5.
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: G23 Wastewater treatment (sludge, filter cake, etc.)
NAICS Code: 325181 Alkalies and Chlorine Manufacturing
Company's Internal Code(s): CC0404
EPA Hazardous Waste Numbers: D002
Current Management Units: Sump 012

0405403H H Active 04/08/2025 On & Off No No

Description from Generator: Demister elements were replaced due to pluggage. In the chlorine cooling area there is a wet gas demister which contains (15) elements. These elements removemoisture and other contaminants from wet chlorine. The elements eventually become plugged with chlorinated resin which comes from fiberglass piping and vessels in the process in the process. Initial generation May 1994. The elements arey
Texas Form Code: 403 Solids resins or polymerized organics
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: G07 Product and by-product processing
NAICS Code: 325181 Alkalies and Chlorine Manufacturing
Company's Internal Code(s): CC0405
EPA Hazardous Waste Numbers: D019 D022 D032 D037 D039 D040 D042
Current Management Units: Container storage area 070

0406609H H Active 04/08/2025 On-site No No

Description from Generator: Chlorinated resin which comes off the walls of the fiberglass piping and vessels in the chlorine drying area.
Texas Form Code: 609 Other organic sludges
EPA Form Code: W609 Other organic sludge
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G13 Cleaning out process equipment
NAICS Code: 325181 Alkalies and Chlorine Manufacturing
Company's Internal Code(s): CC0406
EPA Hazardous Waste Numbers: D019 D022 D039 D040
Current Management Units: Container storage area 070 022

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 ******

0407103H H Active 04/08/2025 Off-site No No

Description from Generator: 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.
Texas Form Code: 103 Spent acid with metals
EPA Form Code: W119 Other inorganic liquid
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G22 Laboratory analytical wastes (used chemicals)
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0407
EPA Hazardous Waste Numbers: D002 D007 D009 D011
Current Management Units: None

04083191 1 Active 04/08/2025 On & Off No No

Description from Generator: 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.
Texas Form Code: 319 Other waste inorganic solids
Origin Code: 2 Result of spill clean-up, equipment decommissioning or emergency removal
Company's Internal Code(s): CC0408
Current Management Units: Container storage area 103
Miscellaneous storage containers 072

04104092 2 Active 04/08/2025 On & Off No No

Description from Generator: Clean-out of Brine Ponds to facilitate inspection of pond liner. Solids/dirt sediment removed from bottom of pond.
Texas Form Code: 409 Other non-halogenated organic solids
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0410
Current Management Units: Container storage area 070
Miscellaneous storage containers 072 035

0411319H H Active 04/08/2025 On-site No No

Description from Generator: 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
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: G09 Other production or service-related processes
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC 0411
EPA Hazardous Waste Numbers: D019 D022 D032 D034 D037 D039 D040
Current Management Units: Miscellaneous storage containers 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 ******

04122061 1 Active 04/08/2025 On-site No No

Description from Generator: Refrigerant-contaminated oil removed from the Chlor-Alkali refrigeration system during maintenance activities
Texas Form Code: 206 Waste oil
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0412
Current Management Units: Container storage area 104

04153191 1 Active 04/08/2025 On & Off No No

Description from Generator: 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.
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): CC0415
Current Management Units: Container storage area 103 070 076 108
Miscellaneous storage containers 072 035

04163192 2 Active 04/08/2025 On & Off No No

Description from Generator: Class 2 alkaline contaminated solids are generated during intermittent maintenance activities and/or caustic spills.
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): CC0416
Current Management Units: Container storage area 103 108 076
Miscellaneous storage containers 072 035

04203191 1 Active 04/08/2025 On & Off No No

Description from Generator: Acid contaminated solids generated from a maintenance activity and or spill clean up.
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): CC0420
Current Management Units: Container storage area 103 070
Miscellaneous storage containers 072 035

04703191 1 Active 04/08/2025 On-site No No

Description from Generator: Chlorine process piping and solids are generated during maintenance activities when solids and/or piping are removed from the 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): CC0470
Current Management Units: Container storage area 103
Miscellaneous storage containers 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 ******

0471319H H Active 04/08/2025 On & Off No No

Description from Generator: Chlorine process piping and solids are generated during maintenance activities when solids and/or piping are removed from the process
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: G15 Process equipment change-out or discontinuation of equipment use
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0471
EPA Hazardous Waste Numbers: D019
Current Management Units: Container storage area 022 113 087
Miscellaneous storage containers 035

04774032 2 Active 04/08/2025 On & Off No No

Description from Generator: 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.
Texas Form Code: 403 Solids resins or polymerized organics
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0477
Current Management Units: Miscellaneous storage containers 072

04903191 1 Active 04/08/2025 On & Off No No

Description from Generator: Ceramic saddles from the C/A units generated during maintenance activities
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): CC0490
Current Management Units: Container storage area 103 070
Miscellaneous storage containers 072

0494110H H Active 04/08/2025 On & Off No No

Description from Generator: Organic contaminated cell renewal wastewater.
Texas Form Code: 110 Caustic aqueous waste
EPA Form Code: W110 Caustic aqueous waste without cyanides
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): CC0494
EPA Hazardous Waste Numbers: D002
Current Management Units: Container storage area 087
Miscellaneous storage containers 033 035
Sump 008

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 ******

04955192 2 Active 04/08/2025 On & Off No No

Description from Generator: Clean out of solids from C/A process ponds.
Texas Form Code: 519 Other inorganic sludges
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0495
Current Management Units: Miscellaneous storage containers 072
Surface impoundment 007

04961101 1 Active 04/08/2025 On & Off No No

Description from Generator: Organic contaminated cell renewal wastewater. Company Waste Description is CC0496.
Texas Form Code: 110 Caustic aqueous waste
Origin Code: 2 Result of spill clean-up, equipment decommissioning or emergency removal
Company's Internal Code(s): CC0496
Current Management Units: Miscellaneous storage containers 072
Sump 008

0497105H H Active 04/08/2025 On-site No No

Description from Generator: Spent Cell renewal dip tank solution
Texas Form Code: 105 Acidic aqueous waste
EPA Form Code: W105 Acidic aqueous wastes less than 5% acid
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G02 Stripping and acid or caustic cleaning
NAICS Code: 325181 Alkalies and Chlorine Manufacturing
Company's Internal Code(s): CC0497
EPA Hazardous Waste Numbers: D002
Current Management Units: Container storage area 100

0498119H H Active 04/08/2025 On & Off No No

Description from Generator: Water generated from wash of the Cl2 Recovery piping
Texas Form Code: 119 Other inorganic liquids
EPA Form Code: W101 Very dilute aqueous waste containing more than 99% water
Origin Code: 2 Result of spill clean-up, equipment decommissioning or emergency removal
Source Code: G13 Cleaning out process equipment
NAICS Code: 325181 Alkalies and Chlorine Manufacturing
Company's Internal Code(s): CC0498
EPA Hazardous Waste Numbers: D007
Current Management Units: None

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 ******

05013192 2 Active 04/08/2025 On & Off No No

Description from Generator: Inlet air housing media from Co-gen unit. Water hardness is deposited on mediawhen water is evaporated.
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): CC0501
Current Management Units: Container storage area 103
Miscellaneous storage containers 072

05023102 2 Active 04/08/2025 On & Off No No

Description from Generator: spent Natural Gas Filters
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): CC0502
Current Management Units: Container storage area 103 068
Miscellaneous storage containers 072

05033192 2 Active 04/08/2025 On & Off No No

Description from Generator: Ion Exchange Resin
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): CC0503
Current Management Units: Container storage area 103 111
Miscellaneous storage containers 118 120 072

0504219H H Active 04/08/2025 On & Off No No

Description from Generator: 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.
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: G19 Other one-time or intermittent processes
NAICS Code: 221121 Electric Bulk Power Transmission and Control
Company's Internal Code(s): CC0504
EPA Hazardous Waste Numbers: D009 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 ******

05053071 1 Active 04/08/2025 On-site No No

Description from Generator: Cogen HRSG tube residue
Texas Form Code: 307 Metal scale, filings or scrap
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0505
Current Management Units: Container storage area 110
Miscellaneous storage containers 072

05063161 1 Active 04/08/2025 On-site No No

Description from Generator: Spent aluminum oxide abrasive is generated when aluminum oxide is used as an abrasive to clean/polish metal equipment or parts.
Texas Form Code: 316 Other metal salts/chemicals
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC 0506
Current Management Units: Container storage area 103 112

0507103H H Active 04/08/2025 Off-site No No

Description from Generator: Ampoules used for field samples analysis at T&D area, procedure STPL 190 Ammonia in wastewater.
Texas Form Code: 103 Spent acid with metals
EPA Form Code: W001 Lab packs with no acute hazardous waste
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G22 Laboratory analytical wastes (used chemicals)
NAICS Code: 324110 Petroleum Refineries
Company's Internal Code(s): CC-0507
EPA Hazardous Waste Numbers: D002 D009
Current Management Units: None

06001131 1 Active 04/08/2025 On & Off No No

Description from Generator: Ethylene commissioning cleaning solution.
Texas Form Code: 113 Other aqueous waste with high dissolved solids
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0600
Current Management Units: Miscellaneous storage containers 072 119 123 122 121

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 04/08/2025 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 126 125 131

06023101 1 Active 04/08/2025 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 072 130 125 120 118

0603003H H Active 04/08/2025 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 04/08/2025 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 ******						
06053041	1	Active	04/08/2025	On & Off	No	No

Description from Generator: Ash, Thermal Residue, Coke Fines that was swept or vacuumed from the SCR furnace 4150 when plugged.
Texas Form Code: 304 Other "dry" ash, slag or thermal residue
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0605
Current Management Units: Container storage area 022
Miscellaneous storage containers 118 125 072

06063041 1 Active 04/08/2025 On & Off No No

Description from Generator: Waste Generated on November 6, 2018.Coke from inside Ethane Cracking Furnace collected during cleaning.
Texas Form Code: 304 Other "dry" ash, slag or thermal residue
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0606
Current Management Units: Miscellaneous storage containers 120 118

0607319H H Active 04/08/2025 On & Off No No

Description from Generator: Trash filtered from plant trenches that gets strained before discharging into the contaminated water storage tank.
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: G13 Cleaning out process equipment
NAICS Code: 324110 Petroleum Refineries
Company's Internal Code(s): CC0607
EPA Hazardous Waste Numbers: D018
Current Management Units: Container storage area 022 113 067
Miscellaneous storage containers 125

06083192 2 Active 04/08/2025 On-site No No

Description from Generator: Dirt, trash and PPE that was generated while cleaning out trenches in the Ethylene unit._____
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): CC0608
Current Management Units: 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 ******

0609393H H Active 04/08/2025 On-site No No

Description from Generator: 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.
Texas Form Code: 393 Catalyst waste
EPA Form Code: W409 Other organic solids
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G08 Removal of spent process liquids or catalysts
NAICS Code: 325110 Petrochemical Manufacturing
Company's Internal Code(s): CC0610
EPA Hazardous Waste Numbers: D010
Current Management Units: Container storage area 067 022 113
Miscellaneous storage containers 125 120 118

06103192 2 Active 04/08/2025 On-site No No

Description from Generator: During the process of regeneration of the ION Exchange vessels, Calcium Sulfate is formed in the effluent of the Cation Beds. High Concentrations of Calcium is removed from the Cation resin using low concentrations of Sulfuric Acid as the regenerate. The Calcium combines with the Sulfur causing the formation of Calcium Sulfate (plaster).
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): CC0610
Current Management Units: Miscellaneous storage containers 120 119

06113192 2 Active 04/08/2025 On & Off No No

Description from Generator: During the process of regeneration of the ION Exchange vessels, Calcium Sulfate is formed in the effluent of the Cation Beds. High Concentrations of Calcium is removed from the Cation resin using low concentrations of Sulfuric Acid as the regenerate. The Calcium combines with the Sulfur causing the formation of Calcium Sulfate (plaster).
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): CC0611
Current Management Units: Miscellaneous storage containers 120 119

06123191 1 Active 04/08/2025 On & Off No No

Description from Generator: Waste generated while cleaning out the contaminated water stripper tank due to fouling of the tank.
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): CC0612
Current Management Units: 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 ******

0613319H H Active 04/08/2025 On & Off No No

Description from Generator: 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.
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: G14 Removal of tank sludge, sediments or slag
NAICS Code: 324110 Petroleum Refineries
Company's Internal Code(s): CC0613
EPA Hazardous Waste Numbers: D018
Current Management Units: Container storage area 022 067 113
Miscellaneous storage containers 125 118

06143041 1 Active 04/08/2025 On-site No No

Description from Generator: Coke from inside ethane cracking furnace coils that had spalled off and was collected in coke catcher during normal operations, and contains moisture.
Texas Form Code: 304 Other "dry" ash, slag or thermal residue
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0614
Current Management Units: Miscellaneous storage containers 120 118

0615206H H Active 04/08/2025 On & Off No No

Description from Generator: New unused wash oil that was recovered while off loading into the wash oil tank.
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: G11 Discarding off-specification or out-of-date chemicals or products
NAICS Code: 324110 Petroleum Refineries
Company's Internal Code(s): CC0615
EPA Hazardous Waste Numbers: U165
Current Management Units: Container storage area 022 113 067
Miscellaneous storage containers 125

06163192 2 Active 04/08/2025 On-site No No

Description from Generator: The waste is generated after steam cleaning and hydro blasting the debutanizer reboiler A&B.
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): CC0616
Current Management Units: 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 ******

0617219H H Active 04/08/2025 On & Off No No

Description from Generator: Waste is from Ethylene Caustic Tanks where caustic is used to scrub out sulfides after furnace cracking.
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: G14 Removal of tank sludge, sediments or slag
NAICS Code: 324110 Petroleum Refineries
Company's Internal Code(s): CC0617
EPA Hazardous Waste Numbers: D002 D003 D018
Current Management Units: Miscellaneous storage containers 125

06183191 1 Active 04/08/2025 On-site No No

Description from Generator: 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.
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): CC0618
Current Management Units: Miscellaneous storage containers 125

0619489H H Active 04/08/2025 On & Off No No

Description from Generator: PPE and Rags used to clean drums and equipment while unused wash oil is recovered during off loading into the wash oil tank.
Texas Form Code: 489 Petroleum contaminated solids
EPA Form Code: W206 Waste oil
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: 324110 Petroleum Refineries
Company's Internal Code(s): CC0619
EPA Hazardous Waste Numbers: U165
Current Management Units: Miscellaneous storage containers 125

06203192 2 Active 04/08/2025 On & Off No No

Description from Generator: Refractory removed from Ethylene thermal oxidizers during maintenance or clean-outs for repairs.
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): CC-0620
Current Management Units: Miscellaneous storage containers 125 121

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 ******

06213192 2 Active 04/08/2025 On & Off No No

Description from Generator: Insulation that was contaminated in the P3 binary area.
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): CC-0621
Current Management Units: Miscellaneous storage containers 125

06223191 1 Active 04/08/2025 On & Off No No

Description from Generator: Prior to shutting unit down, caustic tanks are drained and flushed clean with boiler feed water.
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): CC0622
Current Management Units: Miscellaneous storage containers 125 072

06233931 1 Active 04/08/2025 On & Off No No

Description from Generator: SCR removed from Ethylene and VCM furnaces during maintenance or clean-outs for repairs.
Texas Form Code: 393 Catalyst waste
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0623
Current Management Units: Container storage area 087
Miscellaneous storage containers 118

06243102 2 Active 04/08/2025 On & Off No No

Description from Generator: MOLSIVE/DENSTONE WAS USED IN C-4281 A&B DRYERS TO REMOVE RESIDUAL MOISTURE FROM ETHYLENE.
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): CC0624
Current Management Units: Miscellaneous storage containers 125 130

06253102 2 Active 04/08/2025 On & Off No No

Description from Generator: The molsive/denstone was used in C-4335 Ethylene Dryer to remove residual moisture from ethylene. Dryers were steamed cleaned prior to opening.
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): CC0625
Current Management Units: Miscellaneous storage containers 130

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 ******

06263192 2 Active 04/08/2025 On & Off No No

Description from Generator: 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.
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): CC0626
Current Management Units: Miscellaneous storage containers 118 130

06273192 2 Active 04/08/2025 On & Off No No

Description from Generator: 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.
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): CC0627
Current Management Units: Miscellaneous storage containers 118 130

06283192 2 Active 04/08/2025 On & Off No No

Description from Generator: 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.
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): CC0628
Current Management Units: Miscellaneous storage containers 133 132

06293192 2 Active 04/08/2025 On & Off No No

Description from Generator: 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.
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): CC0629
Current Management Units: Miscellaneous storage containers 130

06303192 2 Active 04/08/2025 On & Off No No

Description from Generator: The packing from C-4452 was removed from equipment during maintenance/shutdown work and replaced. Equipment and packing were steamed cleaned prior to opening.
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): CC0630
Current Management Units: Miscellaneous storage containers 130

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 ******

0631310H H Active 04/08/2025 On & Off No No

Description from Generator: Filter socks used to screen process wastewater into trenches to collect and filter debris and process waste water.
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): CC0631
EPA Hazardous Waste Numbers: D018
Current Management Units: Miscellaneous storage containers 126 125

06323192 2 Active 04/08/2025 On & Off No No

Description from Generator: 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 trenchs around the hydro blast pad.
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): CC0632
Current Management Units: Miscellaneous storage containers 133

06333102 2 Active 04/08/2025 On & Off No No

Description from Generator: Activated carbon used to screen process wastewater to purify the process wastewater.
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): CC0633
Current Management Units: Miscellaneous storage containers 130 131 133 126 132

06343192 2 Active 04/08/2025 On & Off No No

Description from Generator: 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.
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): CC0634
Current Management Units: Miscellaneous storage containers 130

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 ******						
0635319H	H	Active	04/08/2025	On & Off	Yes	No

Description from Generator: Coke fines that filtered through G-4210 A/B strainer and were removed to remove pluggage.The waste generated is NORM positive.
Texas Form Code: 319 Other waste inorganic solids
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: 324110 Petroleum Refineries
Company's Internal Code(s): CC0635
EPA Hazardous Waste Numbers: D018
Current Management Units: Container storage area 022
Miscellaneous storage containers 133

06363192	2	Active	04/08/2025	On & Off	No	No

Description from Generator: E-4211 saturator circulation heater A & B were removed from service to remove pluggage. The waste generated is NORM positive.
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): CC0636
Current Management Units: Miscellaneous storage containers 133 122

06373192	2	Active	04/08/2025	On & Off	No	No

Description from Generator: Solids from the E-4321 Deethanizer which was removed from service during maintenance/shutdown work.
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): CC0637
Current Management Units: Miscellaneous storage containers 133

06383102	2	Active	04/08/2025	On & Off	No	No

Description from Generator: Filter socks used to screen process wastewater going into trenches to collect and filter debris and process waste.
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): CC0638
Current Management Units: Miscellaneous storage containers 133 118

06393102	2	Active	04/08/2025	On-site	No	No

Description from Generator: Fuel Filters removed from service equipment during maintenance for clean-outs or repairs.
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): CC0639
Current Management Units: Miscellaneous storage containers 120

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 ******

06401192 2 Active 04/08/2025 On & Off Yes No

Description from Generator: 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.
Texas Form Code: 119 Other inorganic liquids
Origin Code: 2 Result of spill clean-up, equipment decommissioning or emergency removal
Company's Internal Code(s): CC0640
Current Management Units: Miscellaneous storage containers 133 118

0641319H H Active 04/08/2025 On & Off Yes No

Description from Generator: PPE that was used to remove coke fines that filtered through G-4210 A/B strainer and were removed to remove pluggage.
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: G13 Cleaning out process equipment
NAICS Code: 325110 Petrochemical Manufacturing
Company's Internal Code(s): CC0641
EPA Hazardous Waste Numbers: D018
Current Management Units: Container storage area 022
Miscellaneous storage containers 118

07003191 1 Active 04/08/2025 On & Off No No

Description from Generator: Pipeline Cleaning Debris
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): CC0700
Current Management Units: Miscellaneous storage containers 072

07011011 1 Active 04/08/2025 On & Off No No

Description from Generator: Pipeline Flush Water
Texas Form Code: 101 Aqueous waste with low solvents
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0701
Current Management Units: Miscellaneous storage containers 072

07023101 1 Active 04/08/2025 On & Off No No

Description from Generator: Spent Filters from Ethylene Pipeline
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): CC0702
Current Management Units: Container storage area 022
Miscellaneous storage containers 125 072

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 ******						
07033101	1	Active	04/08/2025	Off-site	No	No

Description from Generator: Waste was generated on 9/19/2018. The molsiv was used in dryers C-9160 A and B to remove residual moisture from Ethylene.
Texas Form Code: 310 Spent solid filters or adsorbents
Origin Code: 2 Result of spill clean-up, equipment decommissioning or emergency removal
Company's Internal Code(s): CC-0703
Current Management Units: None

07044041 1 Active 04/08/2025 On & Off No No

Description from Generator: Ethylene Activated Carbon
Texas Form Code: 404 Spent carbon
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC-0704
Current Management Units: Miscellaneous storage containers 072

07051131 1 Active 04/08/2025 Off-site No No

Description from Generator: Water used to flush through the Markham C-9160 A and B dryers
Texas Form Code: 113 Other aqueous waste with high dissolved solids
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC-0705
Current Management Units: None

07061132 2 Active 04/08/2025 Off-site No No

Description from Generator: Waste was generated from a process regeneration.
Texas Form Code: 113 Other aqueous waste with high dissolved solids
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC-0706
Current Management Units: None

08002071 1 Active 04/08/2025 On-site No No

Description from Generator: Waste is biocide used during commission.
Texas Form Code: 207 Concentrated aqueous solution of other organics
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC-0800
Current Management Units: Miscellaneous storage containers 125

08012011 1 Active 04/08/2025 On-site No No

Description from Generator: Waste name is PC-45.
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-801
Current Management Units: 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 04/08/2025 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 04/08/2025 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 04/08/2025 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 04/08/2025 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

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 ******						
94501992	2	Active	04/08/2025	On & Off	No	No

Description from Generator: Brine/ Sodium Nitrite. Waste generated on 9/21/2017.
Texas Form Code: 199 Brine solution that could also bear the form code 113
Origin Code: 2 Result of spill clean-up, equipment decommissioning or emergency removal
Company's Internal Code(s): CC9450
Current Management Units: Miscellaneous storage containers 072

As of 04/08/2025, 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	04/08/2025	On-site	No	No

Description from Generator: Sand blast sand
Texas Form Code: 389 Nonhazardous sandblasting waste
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0101
Current Management Units: None

01039032	2	Inactive	04/08/2025	On & Off	No	No

Description from Generator: 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.
Texas Form Code: 903
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): Plant Office Refuse
Current Management Units: None

01059012	2	Inactive	04/08/2025	On & Off	No	No

Description from Generator: 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.
Texas Form Code: 901
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): Plant Production Refuse (CC005, 105)
Current Management Units: None

01113902	2	Inactive	04/08/2025	On & Off	No	No

Description from Generator: 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.
Texas Form Code: 390 Nonhazardous concrete/cement/construction debris
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): Miscellaneous Construction Debris
Current Management Units: None

01833102	2	Inactive	04/08/2025	On & Off	No	No

Description from Generator: Metal filters used in various process applications that are uncontaminated; 9/93
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): 01833102
Current Management Units: 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 ****

0199404H H Inactive 04/08/2025 On & Off No No

Description from Generator: Spent carbon contaminated with 1,2-Dichloroethane; 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: G19 Other one-time or intermittent processes
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0199
EPA Hazardous Waste Numbers: D028 U077
Current Management Units: None

0265404H H Inactive 04/08/2025 On & Off No No

Description from Generator: Spent carbon, contaminated with ethylene dichloride.
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: G21 Air pollution control devices (baghouse dust, etc.)
NAICS Code: 325181 Alkalies and Chlorine Manufacturing
Company's Internal Code(s): Spent carbon, EDC contaminated
EPA Hazardous Waste Numbers: D028
Current Management Units: None

02723192 2 Inactive 04/08/2025 On & Off No No

Description from Generator: 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 comesin contact with process.; A new hazardous waste determination has been performed on this waste.
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): CC0272
Current Management Units: None

02863902 2 Inactive 04/08/2025 On & Off No No

Description from Generator: Nonhaz. construction debris includes concrete, rebar, plywood, soil, steelplastic
Texas Form Code: 390 Nonhazardous concrete/cement/construction debris
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): 02863902
Current Management Units: 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 ****

0291407H H Inactive 04/08/2025 No No

Description from Generator: 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 04/08/2025 On & Off No No

Description from Generator: contaminated spent carbon generated from EDC tank cleanouts; Due to waste minimization, ingredient changes or process changes this waste is no longergenerated.
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 04/08/2025 On & Off No No

Description from Generator: Contaminated plant waste generated from activities in the chlorine recoveryarea; 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 04/08/2025 On & Off No No

Description from Generator: C/A wastewater from the chlorine-caustic process areas and stormwater. The waste stream may be characteristically hazardous because the pH may be greater than12.5 (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

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 ****

0460319H H Inactive 04/08/2025 On & Off No No

Description from Generator: Alkali contaminated solids generated from maintenance activities; Initial waste code determination used in incorrect form and/or classification code or other mistake.
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: G25 Hazardous waste managment
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0460
EPA Hazardous Waste Numbers: D002
Current Management Units: None

0478110H H Inactive 04/08/2025 On & Off No No

Description from Generator: 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.
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: G19 Other one-time or intermittent processes
NAICS Code: 325181 Alkalies and Chlorine Manufacturing
EPA Hazardous Waste Numbers: D002
Current Management Units: None

0479105H H Inactive 04/08/2025 On & Off No No

Description from Generator: 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.
Texas Form Code: 105 Acidic aqueous waste
EPA Form Code: W105 Acidic aqueous wastes less than 5% acid
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G06 Painting and coating
NAICS Code: 325181 Alkalies and Chlorine Manufacturing
Company's Internal Code(s): CC0479
EPA Hazardous Waste Numbers: D002
Current Management Units: None

0481407H H Inactive 04/08/2025 On & Off No No

Description from Generator: Suction chiller reboiler replaced during turnaround contaminated with 70% Hexachloroethane (D034).; One time shipment.
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: G15 Process equipment change-out or discontinuation of equipment use
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC0481
EPA Hazardous Waste Numbers: D034
Current Management Units: 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 04/08/2025 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 04/08/2025 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 04/08/2025 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 04/08/2025 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

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 ****

0492307H H Inactive 04/08/2025 On & Off No No

Description from Generator: SOLIDS AND DEBRIS FROM CLEAN OUT OF CHILLED BRINE LINES AND ASSOCIATEDEQUIPMENT.
Texas Form Code: 307 Metal scale, filings or scrap
EPA Form Code: W307 Metal scale, filings or scrap (including metal drums)
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G13 Cleaning out process equipment
NAICS Code: 325181 Alkalies and Chlorine Manufacturing
Company's Internal Code(s): 0492307H
EPA Hazardous Waste Numbers: D007
Current Management Units: None

0499319H H Inactive 04/08/2025 On & Off No No

Description from Generator: Acid tank scale removed during periodic maintenance or turnaround activities.; Initial waste code determination used in incorrect form and/or classification code or other mistake.
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: G09 Other production or service-related processes
NAICS Code: 325181 Alkalies and Chlorine Manufacturing
Company's Internal Code(s): CC0499
EPA Hazardous Waste Numbers: D002
Current Management Units: None

91083022 2 Inactive 04/08/2025 On & Off No No

Description from Generator: ONE-TIME WASTE. Clean-up of ferric chloride dust from demo'd pipe. Waste to be considered inactive on January 19, 2000
Texas Form Code: 302 Soil contaminated with inorganics only
Origin Code: 2 Result of spill clean-up, equipment decommissioning or emergency removal
Company's Internal Code(s): CC0108
Current Management Units: None

9138219H H Inactive 04/08/2025 On & Off No No

Description from Generator: ONE TIME WASTE Waste Resin from on-site maintenance activities. Inactivateas of June 30, 2000.; Due to change(s) in the product produced, this wasteis no longer generated.
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: G09 Other production or service-related processes
NAICS Code: 325181 Alkalies and Chlorine Manufacturing
Company's Internal Code(s): CC9138
EPA Hazardous Waste Numbers: D002
Current Management Units: 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 ****

91511141	1	Inactive	04/08/2025	On & Off	No	No

Description from Generator: 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.
Texas Form Code: 114 Other aqueous waste with low dissolved solids
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC0151
Current Management Units: None

91522971	1	Inactive	04/08/2025	Off-site	No	No

Description from Generator: ONE TIME WASTE - PCB-contaminated mineral oil. Waste inactivated due to one-time shipment.
Texas Form Code: 297 Nonhazardous liquids with >= 50 ppm and < 500 ppm PCBs
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC9152
Current Management Units: None

9153206H	H	Inactive	04/08/2025	Off-site	No	No

Description from Generator: ONE TIME WASTE - Mineral Oil contaminated with PCBs and spent solvent. Waste inactivated due to one-time shipment.
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: 325181 Alkalies and Chlorine Manufacturing
Company's Internal Code(s): CC9153
EPA Hazardous Waste Numbers: D001 D028 D040 F001 F002
Current Management Units: None

9154319H	H	Inactive	04/08/2025	Off-site	No	No

Description from Generator: ONE TIME WASTE - Solids contaminated with PCB-contaminated mineral oil and spentsolvents.
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: G16 Oil changes and filter or battery replacement
NAICS Code: 325181 Alkalies and Chlorine Manufacturing
Company's Internal Code(s): CC9154
EPA Hazardous Waste Numbers: F001 F002
Current Management Units: None

91553971	1	Inactive	04/08/2025	Off-site	No	No

Description from Generator: ONE TIME WASTE - PCB capacitors; One time shipment.
Texas Form Code: 397 Nonhazardous electrical equipment/devices with >= 500 ppm PCBs
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC9155
Current Management Units: 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 ****

91564091 1 Inactive 04/08/2025 On & Off No No

Description from Generator: ONE TIME WASTE - unused hydroquinone; One time shipment.
Texas Form Code: 409 Other non-halogenated organic solids
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CC9156
Current Management Units: None

9157301H H Inactive 04/08/2025 On-site No No

Description from Generator: ONE TIME WASTE - 130 tanks dike sump cleanout material.
Texas Form Code: 301 Soil contaminated with organics
EPA Form Code: W301 Contaminated Soil
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G14 Removal of tank sludge, sediments or slag
NAICS Code: 325199 All Other Basic Organic Chemical Manufacturing
Company's Internal Code(s): CC9157
EPA Hazardous Waste Numbers: U077
Current Management Units: None

9158404H H Inactive 04/08/2025 On-site No No

Description from Generator: Used activated carbon removed from the chlorine recovery process.; 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: 2 Result of spill clean-up, equipment decommissioning or emergency removal
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): CC9158
EPA Hazardous Waste Numbers: D019 U211
Current Management Units: None

91723192 2 Inactive 04/08/2025 On & Off No No

Description from Generator: ONE-TIME WASTE: Stabilization sand for tank foundation. Tank was demolished.; One time shipment.
Texas Form Code: 319 Other waste inorganic solids
Origin Code: 2 Result of spill clean-up, equipment decommissioning or emergency removal
Company's Internal Code(s): CC9172
Current Management Units: None

91953191 1 Inactive 04/08/2025 On & Off No No

Description from Generator: ONE-TIME WASTE. Permanite powder was left over from a job at the plant site. This waste code should be inactivated by06/30/2004.; 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): CC9195
Current Management Units: 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 ****

9197319H H Inactive 04/08/2025 On & Off No No

Description from Generator: 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.
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: G11 Discarding off-specification or out-of-date chemicals or products
NAICS Code: 325181 Alkalies and Chlorine Manufacturing
Company's Internal Code(s): CC9197
EPA Hazardous Waste Numbers: D001
Current Management Units: None

9296219H H Inactive 04/08/2025 On & Off No No

Description from Generator: ONE-TIME WASTE. Metals spiking solutions from MACT trial burn. This waste codeshould be inactivated by 06/30/2004.; One time shipment.
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): CC9296
EPA Hazardous Waste Numbers: D007 D008
Current Management Units: None

9444202H H Inactive 04/08/2025 On & Off No No

Description from Generator: 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.
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
NAICS Code: 325181 Alkalies and Chlorine Manufacturing
Company's Internal Code(s): CC0444
EPA Hazardous Waste Numbers: F002
Current Management Units: None

94453192 2 Inactive 04/08/2025 On & Off No No

Description from Generator: 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.
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): CC9445
Current Management Units: 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 ****

94462191 1 Inactive 04/08/2025 On & Off No No

Description from Generator: 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 04/08/2025 No No

Description from Generator: 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 04/08/2025 No No

Description from Generator: 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 04/08/2025 No No

Description from Generator: 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 F003 F005 F025 K019 K020
Current Management Units: None

As of 04/08/2025, The next unassigned sequence number for WASTES is 9451

38280 OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT

****** UNITS AT THIS SITE MANAGING WASTE ******

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
001	Tank (surface)	INACTIVE	08/01/1990	NA / NA	NA	NA	10 RCRA Permit exempt - Other	YES /

Description from Company:
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.

002	Container storage area	INACTIVE	04/01/1988	NA / NA	NA	NA	10 RCRA Permit exempt - Other	YES /

Description from Company: Chlorine compressor inlet cooler pad
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.

003	Sump	ACTIVE		1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: Ship dock sump tank
System Types: 135 Discharge to sewer/POTW or NPDES (with prior storage - with or without treatment)
Wastes Currently Managed at Unit: 04001131 C/A wastewater from the chlorine-causticprocess areas and stormwater. Estimatedinitial generation 1988.

004	Waste pile	INACTIVE	01/01/1988	NA / NA	NA	NA	10 RCRA Permit exempt - Other	YES /

Description from Company: South area construction debris area
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.

005	Tank (surface)	CLOSED	07/01/1989	H / NA	NA	NA	13 RCRA Pmt Exempt - Accumulation Time	YES /

Description from Company: Waste drum storage area i
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Previously Managed at Unit: 0203211H

006	Container storage area	CLOSED	08/27/2020	1 / NA	004	NA	01 RCRA permitted unit	YES /

Description from Company: Chlor-Alkali CSA / CSA, 63-ft by 18 ft paved and curbed foundation covered by roof and surrounded by 3 walls, designed to store 80 55-gallons containers. / NOTE: Cl1-1ED Mod Closed this unit on Effective Date: 8/27/2020.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Previously Managed at Unit:

0016202H	0106489H	01073101	0108407H	0117211H	01184091	01323192	0133409H	0136206H	0138219H	0139219H	0140209H	01764891
0177205H	0180309H	01833102	01843101	01853192	01873192	0190404H	01914891	0192204H	01933192	01943192	01953192	0196409H
0202211H	02274912	0229407H	0238319H	0241301H	0242303H	0243319H	0244407H	02453931	0247319H	0248219H	0249310H	0250404H
02523192	0260310H	0265404H	0267407H	02704042	02713192	02723192	0273319H	0289303H	0301301H	0339219H	04013901	0406609H
04083191	04153191	0424310H	0479105H	0482202H	0483202H	04854092	0488206H	0492307H	0499319H	91083022	9138219H	91511141
9444202H	94453192											

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
007	Surface impoundment	ACTIVE	06/01/1976	12H / NA	NA	NA	10 RCRA Permit exempt - Other	YES /

Description from Company: Chloroine/alkali process wastewater surface impoundments Cap: c mm gal
Wastes Currently Managed at Unit: 04001131 C/A wastewater from the chlorine-causticprocess areas and stormwater. Estimatedinitial generation 1988.
04955192 Clean out of solids from C/A process ponds.
Wastes Previously Managed at Unit: 0450110H

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
008	Sump	ACTIVE		1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: Cell renewal sump
Wastes Currently Managed at Unit: 04001131 C/A wastewater from the chlorine-causticprocess areas and stormwater. Estimatedinitial generation 1988.
0494110H Organic contaminated cell renewal wastewater.
04961101 Organic contaminated cell renewal wastewater. Company Waste Description is CC0496.

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
009	Sump	ACTIVE		2 / NA	NA	NA	05 Non-Hazardous Regulated	YES /

Description from Company: Brine purification blow-down sump
Wastes Currently Managed at Unit: 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

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
010	Sump	ACTIVE		1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: Chlorine drying area sump
Wastes Currently Managed at Unit: 04001131 C/A wastewater from the chlorine-causticprocess areas and stormwater. Estimatedinitial generation 1988.

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
011	Sump	ACTIVE		1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: Spent acid storage area sump
Wastes Currently Managed at Unit: 04001131 C/A wastewater from the chlorine-causticprocess areas and stormwater. Estimatedinitial generation 1988.

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
012	Sump	ACTIVE		H / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: Chloroine/alkali process wastewater pH adjustment sumps
Wastes Currently Managed at Unit: 0404110H Sulfate purge wastewater from caustic area to neutralization sump. Stream maybe hazardous due to pH above 12.5.

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
013	Sump	ACTIVE		1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: Oil separation sump
System Types: 120 Combination of chemical, biological, and/or physical treatment
Wastes Currently Managed at Unit: 04001131 C/A wastewater from the chlorine-causticprocess areas and stormwater. Estimatedinitial generation 1988.
Wastes Previously Managed at Unit: 01501021

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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
014	Tank (surface)	INACTIVE	07/19/2012	2 / NA	NA	NA	05 Non-Hazardous Regulated	YES /

Description from Company: Brine sludge filtration facility Cap: 86 gpm
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Previously Managed at Unit: 04023062

015	Sump	INACTIVE	07/09/2004	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: 104 tank farm sump
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

016	Sump	INACTIVE	07/09/2004	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: 105 tank farm sump
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

017	Tank (surface)	ACTIVE		1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: 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
System Types: 081 Biological treatment with or without precipitation
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

018	Tank (surface)	INACTIVE	12/20/1995	NA / NA	NA	NA	10 RCRA Permit exempt - Other	YES /

Description from Company: 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 /

Description from Company: EDC wastewater unit sludge dumpster storage area Cap: 30 yards
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Previously Managed at Unit: 02274912

020	Tank (surface)	INACTIVE	12/20/1995	NA / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: 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 /

Description from Company: Cell renewal dumpster storage area Cap: 60 yards

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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

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: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.

Wastes Currently Managed at Unit:
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-containingequipment.
0136206H Waste oil generated during maintanence 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 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.

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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

Wastes Currently Managed at Unit: 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.
0635319H Coke fines that filtered through G-4210 A/B strainer and were removed to remove pluggage.The waste generated is NORM positive.
0641319H PPE that was used to remove coke fines that filtered through G-4210 A/B strainer and were removed to remove pluggage.
07023101 Spent Filters from Ethylene Pipeline

Wastes Previously Managed at Unit:

01073101	01184091	01323192	01412101	01423191	01764891	01792061	01833102	01843101	01853192	01863191	01873192	01914891	
01933192	01943192	01953192	0199404H	02453931	02523192	0265404H	0267407H	02704042	02713192	02723192	02962111	0339219H	
04013901	04083191	04153191	04203191	0424310H	0460319H	0479105H	0482202H	0483202H	0499319H	05033192	91083022	9138219H	
91564091	91723192	91953191	9197319H	9296219H	9444202H	94453192							

023	Tank (surface)	ACTIVE	10/05/1990	H / NA	006	NA	01 RCRA permitted unit	YES /

Description from Company: 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"

System Types: 040 Incineration - thermal destruction other than use as a fuel

Wastes Currently Managed at Unit: 0016202H Oxy Vinyls La Porte Chlorinated By-product
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
0251219H VCM Light Ends are generated at the VCM Unit during the purification process. Estimated initial generation date 4Q91.

Wastes Previously Managed at Unit: 0339219H

024	Waste Treatment Facility	INACTIVE	12/20/1995	H / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: Biological Treatment Unit

Wastes Previously Managed at Unit: 0228491H

025	Tank (surface)	INACTIVE	12/20/1995	NA / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: 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 /

Description from Company: 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 /

Description from Company: 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 /

Description from Company: 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 /

Description from Company: EDC WASTEWATER UNIT SANDFILTER

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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
030	Tank (surface)	INACTIVE	12/20/1995	NA / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: EDC WASTEWATER UNIT SECONDARY pH ADJUSTMENT TANK

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
031	Tank (surface)	CLOSURE REQUEST	02/12/2014	1 / NA	NA	NA	10 RCRA Permit exempt - Other	YES /

Description from Company: EDC WASTEWATER UNIT FILTER PRESS
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

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
032	Tank (surface)	ACTIVE	04/22/1992	1 / NA	NA	NA	10 RCRA Permit exempt - Other	YES /

Description from Company: EDC WASTEWATER UNIT FILTER PRESS FILTRATE TANK
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

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
033	Miscellaneous storage containers	ACTIVE	04/22/1992	2H / NA	NA	NA	10 RCRA Permit exempt - Other	YES /

Description from Company: Concrete pad area North of EDC Wastewater Belt Press Building
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 0494110H Organic contaminated cell renewal wastewater.
Wastes Previously Managed at Unit: 02274912

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
034	Tank (surface)	INACTIVE	12/20/1995	NA / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: EDC UNIT STORMWATER AND PROCESS WATER COLLECTION TANK

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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
035	Miscellaneous storage containers	ACTIVE	04/22/1992	1 / NA	NA	NA	10 RCRA Permit exempt - Other	YES /

Description from Company: Cell renewal dumpster sto

System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.

Wastes Currently Managed at Unit:
01073101 Clean up of oil and fuel spills. Estimated initial date of generation 1988.
01513071 Rust/scale that is removed from decontaminated process equipment
01863191 Drained, oil-containing equipment removed from service. Oil is drained from equipment.
01933192 uncontaminated fire brick material from periodic maintenance or turnaroundactivities
01943192 Uncontaminated plastic packing removed during periodic maintenance orturnaround activities
01953192 Uncontaminated fiberglass plastic (FRP) material generated from maintenanceor turnaround activities
0197488H CONTAMINATED COOLING TOWER WOOD GENERATED FROM REPAIRS TO PLANTCOOLING TOWERS
01983192 Ceramic packing removed during periodic maintenance or turnaround activities.
02003192 waste fireproofing material
02543061 Limestone sludge is generated during neutralization of HCl generated during incineration of chlorinated organics. The m
02563191 Rockbox residue generated during lean-out and other maintenance activities required at limestone neutralization equipmen
02573062 Limestone sludge is generated during neutralization of Hcl generated during incineration of chlorinated organics
02593192 Rockbox residue generated during clean out and other maintenance activities required at limestone neutralization equipment.
0267407H Incinerator Absorber Solids are generated during maintenance or clean-out of incinerator acid absorber system.
0292404H Spent activated carbon used to remove organics from EDC/VCM wastewater.
0294319H Sandfilter Sand
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
04033111 Asbestos and asbestos contaminated material
04104092 Clean-out of Brine Ponds to facilitate inspection of pond liner. Solids/dirt sediment removed from bottom of pond.
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
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.
04703191 Chlorine process piping and solids are generated during maintenance activities when solids and/or piping are removed from the process.
0471319H Chlorine process piping and solids are generated during maintenance activities when solids and/or piping are removed from the process
0494110H Organic contaminated cell renewal wastewater.

Wastes Previously Managed at Unit: 0450110H 0460319H

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
036	Tank (surface)	ACTIVE	04/22/1992	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: D501 STORM WATER COLLECTION TANK

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

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
037	Tank (surface)	ACTIVE	04/22/1992	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: D502 STORM WATER COLLECTION TANK

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

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
038	Tank (surface)	ACTIVE	04/22/1992	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: D503 STORM WATER COLLECTION TANK

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

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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
039	Tank (surface)	ACTIVE	04/22/1992	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: D525 STORM WATER STORAGE TANK A
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

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
040	Tank (surface)	ACTIVE	04/22/1992	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: D525 STORM WATER STORAGE TANK B
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

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
041	Tank (surface)	ACTIVE	04/22/1992	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: D531 EQUALIZATION TANK
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

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
042	Tank (surface)	ACTIVE	04/22/1992	1H / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: D532 BIOTREATER
System Types: 081 Biological treatment with or without precipitation
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
0228491H Dewatered biological treatment sludge (biomass) is generated from the waterwatertreatment plant operated at this facility.The stream is designated hazardous due to the derived from rule

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
043	Tank (surface)	ACTIVE	04/22/1992	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: Z531A EFFLUENT CLARIFIER
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

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
044	Tank (surface)	ACTIVE	04/22/1992	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: Z531B EFFLUENT CLARIFIER
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

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
045	Tank (surface)	ACTIVE	04/22/1992	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: 533A MEDIA FILTER
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

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
046	Tank (surface)	ACTIVE	04/22/1992	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: Z533B MEDIA FILTER
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

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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
047	Tank (surface)	ACTIVE	04/22/1992	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: D535 AEROBIC DIGESTER

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

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
048	Miscellaneous storage containers	CLOSED	02/11/2016	12 / NA	003	NA	01 RCRA permitted unit	YES /

Description from Company: Z530 WASTEWATER TREATMENT PLANT SLUDGE STORAGE AREA / NOTE: The waste in the container storage area was delisted by EPA and no longer a hazardous waste, effective 2/11/2016.

Wastes Previously Managed at Unit: 02274912 0228491H 0253306H 02543061 02573062

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
049	Tank (surface)	ACTIVE	04/22/1992	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: D544 WATER OUTFALL TANK

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

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
050	Tank (surface)	ACTIVE	04/22/1992	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: D591 LIMESTONE NEUTRALIZER

System Types: 121 Neutralization only

Wastes Currently Managed at Unit: 0253306H Limestone sludge is generated during neutralization of HC1 generated during incinceration of chlorinated organics. The material is dewatered and collected in containers. The stream is
02543061 Limestone sludge is generated during neutralization of HCl generated during incineration of chlorinated organics. The m
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 equipmen
02573062 Limestone sludge is generated during neutralization of Hcl generated during incineration of chlorinated organics
02593192 Rockbox residue generated during clean out and other maintenance activities required at limestone neutralization equipment.
0293105H Hazardous wastewater at VCM; low pH water due to HCl in stream from incinerators.

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
051	Tank (surface)	INACTIVE	06/06/1997	NA / NA	NA	NA	10 RCRA Permit exempt - Other	YES /

Description from Company: D590A HCL STORAGE

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
052	Tank (surface)	INACTIVE	06/06/1997	NA / NA	NA	NA	10 RCRA Permit exempt - Other	YES /

Description from Company: D590B HCL STORAGE

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
053	Tank (surface)	ACTIVE	04/22/1992	12H / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: D596 LIMESTONE NEUTRALIZER PRIMARY pH TANK

Wastes Currently Managed at Unit: 0253306H Limestone sludge is generated during neutralization of HC1 generated during incinceration of chlorinated organics. The material is dewatered and collected in containers. The stream is
02543061 Limestone sludge is generated during neutralization of HCl generated during incineration of chlorinated organics. The m
02573062 Limestone sludge is generated during neutralization of Hcl generated during incineration of chlorinated organics
0293105H Hazardous wastewater at VCM; low pH water due to HCl in stream from incinerators.

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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
054	Tank (surface)	ACTIVE	04/22/1992	12H / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: D597 LIMESTONE NEUTRALIZER SECONDARY pH TANK

Wastes Currently Managed at Unit: 0253306H Limestone sludge is generated during neutralization of HC1 generated during incinceration of chlorinated organics. The material is dewatered and collected in containers. The stream is
02543061 Limestone sludge is generated during neutralization of HCl generated during incineration of chlorinated organics. The m
02573062 Limestone sludge is generated during neutralization of Hcl generated during incineration of chlorinated organics
0293105H Hazardous wastewater at VCM; low pH water due to HCl in stream from incinerators.

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
055	Tank (surface)	ACTIVE	04/22/1992	12H / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: D598 NEUTRALIZER PUMP TANK

Wastes Currently Managed at Unit: 0253306H Limestone sludge is generated during neutralization of HC1 generated during incinceration of chlorinated organics. The material is dewatered and collected in containers. The stream is
02543061 Limestone sludge is generated during neutralization of HCl generated during incineration of chlorinated organics. The m
02573062 Limestone sludge is generated during neutralization of Hcl generated during incineration of chlorinated organics

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
056	Tank (surface)	ACTIVE	04/22/1992	12H / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: Z590 LIMESTONE NEUTRALIZER CLARIFIER

Wastes Currently Managed at Unit: 0253306H Limestone sludge is generated during neutralization of HC1 generated during incinceration of chlorinated organics. The material is dewatered and collected in containers. The stream is
02543061 Limestone sludge is generated during neutralization of HCl generated during incineration of chlorinated organics. The m
02573062 Limestone sludge is generated during neutralization of Hcl generated during incineration of chlorinated organics

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
057	Tank (surface)	ACTIVE	04/22/1992	12H / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: D542 Belt Press Tank

Wastes Currently Managed at Unit: 0253306H Limestone sludge is generated during neutralization of HC1 generated during incinceration of chlorinated organics. The material is dewatered and collected in containers. The stream is
02543061 Limestone sludge is generated during neutralization of HCl generated during incineration of chlorinated organics. The m
02573062 Limestone sludge is generated during neutralization of Hcl generated during incineration of chlorinated organics

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
058	Tank (surface)	ACTIVE	04/22/1992	12H / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: D595 NEUTRALIZER CLARIFIER EFFLUENT PUMP TANK

Wastes Currently Managed at Unit: 0253306H Limestone sludge is generated during neutralization of HC1 generated during incinceration of chlorinated organics. The material is dewatered and collected in containers. The stream is
02543061 Limestone sludge is generated during neutralization of HCl generated during incineration of chlorinated organics. The m
02573062 Limestone sludge is generated during neutralization of Hcl generated during incineration of chlorinated organics

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
059	Tank (surface)	ACTIVE	04/22/1992	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: D534 EFFLUENT CLARIFIER PUMP TANK

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
02962111 Waste polymer generated from wastewater treatment process.

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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
060	Tank (surface)	ACTIVE	04/22/1992	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: D533B EFFLUENT CLARIFIER SCUM TANK

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

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
061	Tank (surface)	ACTIVE	04/22/1992	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: D546 FILTER BACKWASH PUMP TANK

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

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
062	Sump	ACTIVE	04/22/1992	1 / NA	NA	NA	10 RCRA Permit exempt - Other	YES /

Description from Company: Q541 BIOSLUDGE SUMP

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

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
063	Sump	ACTIVE	04/22/1992	H / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: 6555 INCINERATOR HCL SUMP

Wastes Currently Managed at Unit: 0293105H Hazardous wastewater at VCM; low pH water due to HCl in stream from incinerators.

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
064	Sump	ACTIVE	04/22/1992	H / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: G575 Incinerator HCl Sump

Wastes Currently Managed at Unit: 0293105H Hazardous wastewater at VCM; low pH water due to HCl in stream from incinerators.

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
065	Incinerator	ACTIVE	05/28/1993	H / NA	001	NA	01 RCRA permitted unit	YES /

Description from Company: 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.

System Types: 040 Incineration - thermal destruction other than use as a fuel

Wastes Currently Managed at Unit:
0016202H Oxy Vinyls La Porte Chlorinated By-product
0136206H Waste oil generated during maintanence of pumps or other oil containing equipment.
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
0251219H VCM Light Ends are generated at the VCM Unit during the purification process. Estimated initial generation date 4Q91.
0293105H Hazardous wastewater at VCM; low pH water due to HCl in stream from incinerators.
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

Wastes Previously Managed at Unit: 0117211H

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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
066	Incinerator	ACTIVE	05/28/1993	H / NA	002	NA	01 RCRA permitted unit	YES /

Description from Company: CCIN-2 / 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.

System Types: 040 Incineration - thermal destruction other than use as a fuel

Wastes Currently Managed at Unit:
0016202H Oxy Vinyls La Porte Chlorinated By-product
0136206H Waste oil generated during maintanence of pumps or other oil containing equipment.
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
0251219H VCM Light Ends are generated at the VCM Unit during the purification process. Estimated initial generation date 4Q91.
0293105H Hazardous wastewater at VCM; low pH water due to HCl in stream from incinerators.
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

Wastes Previously Managed at Unit: 0117211H

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
067	Container storage area	ACTIVE	05/28/1993	1 / NA	NA	NA	13 RCRA Pmt Exempt - Accumulation Time	YES /

Description from Company: Container storage area located south of hydroblast pad in VCM unit.

System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.

Wastes Currently Managed at Unit:
0106489H Clean up of fuel / lubrication oil spills, leaks, and drips
0121319H Broken lamps generated during replacement and maintenance of lights.
0136206H Waste oil generated during maintanence of pumps or other oil containing equipment.
0139219H Unused sealant/adhesive that was not used during maintenance activities that is no longer needed, or out of spec.
01513071 Rust/scale that is removed from decontaminated process equipment
0152319H Spent sandblasting media used to clean process equipment and vessels.
01734902 Sandblasting sand used in daily maintenance activities throughout the plant. Initial date of generation was 06/87.
01884061 RCRA empty containers - drums, totes, etc. from industrial water treatment chemicals and oil.
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.
0239407H Reboiler scale and VCM furnace coke mixture.
02403191 VCM process area trench material (non-hazardous)
0241301H Solvent contaminated media (typically soil) is generated during spill clean-up and/or general plant cleanup in the EDC/VCM units.
0244407H VCM Furnace Coke - carbon residue; 12/91
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.
0273319H Spent molecular sieve form OHC dryer generated when it becomes spent and is replaced.
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.
0601201H Methanol & Water
0607319H Trash filtered from plant trenches that gets strained before discharging into the contaminated water storage tank.
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.
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.

Wastes Previously Managed at Unit: 0247319H 0255319H 94473191

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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
068	Container storage area	ACTIVE	05/28/1993	1 / NA	NA	NA	13 RCRA Pmt Exempt - Accumulation Time	YES /

Description from Company: Paved container storage area at VCM Heavy Ends Loading/Unloading.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit:
02403191 VCM process area trench material (non-hazardous)
0241301H Solvent contaminated media (typically soil) is generated during spill clean-up and/or general plant cleanup in the EDC/VCM units.
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.
02523192 Wastewater stripper packing. Packing in wastewater trippers must be periodically replaced. Prior to maintenance activities, column (& packing) is decontaminated by steaming until
02543061 Limestone sludge is generated during neutralization of HCl generated during incineration of chlorinated organics. The m
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 equipmen
0258219H Mother Liquor from direct chlorination reactor in the VCM unit.
02593192 Rockbox residue generated during clean out and other maintenance activities required at limestone neutralization equipment.
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 "derive
02704042 Spent activated carbon drums generated during maintenance activities. Drums areused as back-up devices in vacuuming activities. Materials vacuumed are steamcleaned before vacuumin
0292404H Spent activated carbon used to remove organics from EDC/VCM wastewater.
0294319H Sandfilter Sand
05023102 spent Natural Gas Filters

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
069	Sump	ACTIVE	05/28/1993	1H / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: Hydroblast pad sump/filter located in VCM unit.
System Types: 120 Combination of chemical, biological, and/or physical treatment
Wastes Currently Managed at Unit: 0229407H Reboiler scale produced when carbon builds up on the walls of the reboiler tubes.
Wastes Previously Managed at Unit: 94473191

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
070	Container storage area	ACTIVE	05/28/1993	1 / NA	NA	NA	13 RCRA Pmt Exempt - Accumulation Time	YES /

Description from Company: Northwest section of 130
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit:
01884061 RCRA empty containers - drums, totes, etc. from industrial water treatment chemicals and oil.
0241301H Solvent contaminated media (typically soil) is generated during spill clean-up and/or general plant cleanup in the EDC/VCM units.
02962111 Waste polymer generated from wastewater treatment process.
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
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 removemoisture and other
0406609H Chlorinated resin which comes off the walls of the fiberglass piping and vessels in the chlorine drying area.
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
04203191 Acid contaminated solids generated from a maintenance activity and or spill clean up.
04903191 Ceramic saddles from the C/A units generated during maintenance activities
Wastes Previously Managed at Unit: 0199404H 0303404H 04083191 9157301H 94473191

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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
071	Miscellaneous storage containers	ACTIVE	05/28/1993	2 / NA	NA	NA	05 Non-Hazardous Regulated	YES /

Description from Company: Miscellaneous containers for storage of plant trash.

System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.

Wastes Currently Managed at Unit: 01029992 Plant trash from offices and plant production. Includes paper, glass, scrapmetal, plastic, wood, empty containers.
01049022 Supplemental plant production refuse from manufacture of chlorine, caustic soda,ethylene dichloride. This includes metal parts, floor sweepings, and scrap materials. Initial generation

Wastes Previously Managed at Unit: 01039032 01059012

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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
072	Miscellaneous storage containers	ACTIVE	05/28/1993	1 / NA	NA	NA	05 Non-Hazardous Regulated	YES /

Description from Company: Plantwide miscellaneous containers for storage of non-hazardous waste.

System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.

Wastes Currently Managed at Unit:
01003902 Debris from firebox/furnace repair - fire brick, insulation, soil wooden pallets, etc.; 10/93
01073101 Clean up of oil and fuel spills. Estimated initial date of generation 1988.
01101141 Co-generation wastewater stream
01134092 Waste is generated during the disassembly/demolition or the construction of onsite cooling towers.
01143191 Cooling tower repairs. Initial generation 1988.
01184091 Waste Permanite Powder from maintenance activities.
01323192 Bead blaster material is generated from the cleaning of the maintenance beadblaster machine which cleans parts.
01372962 Waste Antifreeze
01412101 Unused epoxy/adhesive that was not used during maintenance, and is no longer needed, and it is out of spec.
01423191 Waste fireproofing from maintenance activities
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
01604881 Spent railroad ties are generated when wooden railroad ties are removed from service and can no longer be used.
01734902 Sandblasting sand used in daily maintenance activities throughout the plant. Initial date of generation was 06/87.
01743902 Miscellaneous construction debris generated from improvements and/or repairs toareas throught the plant. Initial date of generation was 06/90.
01764891 Soil generated from the clean-up of a diesel spill from plant machinery. Initial date of generation was 8/94.
01780092 Medical waste generated by daily activities at the Medical Department. Date ofinitial generation was 12/89.
01792061 Used oil generated from equipment oil change outs.
01843101 Used oil filters
01853192 Drained, non-PCB electrical equipment (capacitors and transformers)
01863191 Drained, oil-containing equipment removed from service. Oil is drained from equipment.
01873192 Activated alumina used as a desiccant throughout the plant. White ball form.
01884061 RCRA empty containers - drums, totes, etc. from industrial water treatment chemicals and oil.
01914891 HARDENED ASPHALT
01933192 uncontaminated fire brick material from periodic maintenance or turnaroundactivities
01943192 Uncontaminated plastic packing removed during periodic maintenance orturnaround activities
01953192 Uncontaminated fiberglass plastic (FRP) material generated from maintenanceor turnaround activities
01983192 Ceramic packing removed during periodic maintenance or turnaround activities.
02003192 waste fireproofing material
02052192 Unused/Unspent firefighting foam in plastic totes that have solidified due to weathering on the container.
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
02374031 Steam Stripper Packing
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
02523192 Wastewater stripper packing. Packing in wastewater trippers must be periodically replaced. Prior to maintenance activities, column (& packing) is decontaminated by steaming until
02543061 Limestone sludge is generated during neutralization of HCl generated during incineration of chlorinated organics. The m
02563191 Rockbox residue generated during lean-out and other maintenance activities required at limestone neutralization equipmen
02573062 Limestone sludge is generated during neutralization of Hcl generated during incineration of chlorinated organics
02593192 Rockbox residue generated during clean out and other maintenance activities required at limestone neutralization equipment.
02704042 Spent activated carbon drums generated during maintenance activities. Drums areused as back-up devices in vacuuming activities. Materials vacuumed are steamcleaned before vacuumin
02713192 Air dryer dessicant from VCM air compressor generated when it becomes spent & replaced with new dessicant. Material is used to dry moisture out of compressed air & never comes in
02903902 nonhaz. construction debris includes concrete,rebar,plywood,soil,plasticinsulation(non-asbestos),steel(pipe,etc)
02962111 Waste polymer generated from wastewater treatment process.
02973022 Cooling Tower sludge generated from the clean-out of cooling tower basins
04001131 C/A wastewater from the chlorine-causticprocess areas and stormwater. Estimatedinitial generation 1988.
04013901 Demo debris, bricks, dirt, cement from demolition of pads and trenches inprocess areas.
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
04033111 Asbestos and asbestos contaminated material
04083191 Contaminated nonhazardous inorganic solids are generated during spill clean-up and/or general work activities associated with the chlorine recovery process equipment. Estimated initial

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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

Wastes Currently Managed at Unit:
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
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
94501992 Brine/ Sodium Nitrite. Waste generated on 9/21/2017.

Wastes Previously Managed at Unit: 00700011 01113902 0601201H 0603003H 0604388H

073	Container storage area	ACTIVE	10/10/1994	1 / NA	NA	NA	13 RCRA Pmt Exempt - Accumulation Time	YES /

Description from Company: Container storage area located at the Oxyhydrochlorination (OHC) Unit in the VCM Plant.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit:
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 equipmen
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

Wastes Previously Managed at Unit: 02863902

074	Miscellaneous storage containers	ACTIVE	12/20/1994	2 / NA	NA	NA	05 Non-Hazardous Regulated	YES /

Description from Company: Medical Department Building storing Class 2 medical waste.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 01780092 Medical waste generated by daily activities at the Medical Department. Date ofinitial generation was 12/89.

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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
075	Tank	CLOSED	04/20/1999	H / NA	NA	NA	13 RCRA Pmt Exempt - Accumulation Time	YES /

Description from Company: Tank D-03 used for the storage of Heavy Ends from the EDC Plant. The tank has a capacity of 125,000 gallons.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Previously Managed at Unit: 0339219H

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
076	Container storage area	ACTIVE	04/28/1995	12H / NA	NA	NA	13 RCRA Pmt Exempt - Accumulation Time	YES /

Description from Company: Container storage area in the Caustic area.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 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.
Wastes Previously Managed at Unit: 0478110H

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
077	Miscellaneous storage containers	INACTIVE	08/26/2003	H / NA	NA	NA	13 RCRA Pmt Exempt - Accumulation Time	YES /

Description from Company: miscellaneous storage are
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Previously Managed at Unit: 0247319H 0253306H 0255319H 0260310H

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
078	Miscellaneous storage containers	ACTIVE	04/28/1995	H / NA	NA	NA	13 RCRA Pmt Exempt - Accumulation Time	YES /

Description from Company: Approximately 196 square foot concrete area just east of Chlorine Park.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Previously Managed at Unit: 0481407H

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
079	Miscellaneous storage containers	INACTIVE	02/14/1997	H / NA	NA	NA	13 RCRA Pmt Exempt - Accumulation Time	YES /

Description from Company: Approximately 196 Square foot concrete area just east of chlorine park.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Previously Managed at Unit: 0481407H

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
080	Miscellaneous storage containers	ACTIVE	02/02/1996	2 / NA	NA	NA	05 Non-Hazardous Regulated	YES /

Description from Company: Entire VCM expansion construction site will manage misc. construction debris
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 01743902 Miscellaneous construction debris generated from improvements and/or repairs toareas throught the plant. Initial date of generation was 06/90.
Wastes Previously Managed at Unit: 02863902

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
081	Tank	CLOSED	11/05/2015	H / NA	008	NA	01 RCRA permitted unit	YES /

Description from Company: Tank 6D-02 used for the storage of Heavy ends from the EDC Plant. Closure Certification Letter Rec'd on Date: 11/05/2015.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Previously Managed at Unit: 0339219H

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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
082	Tank (surface)	ACTIVE	02/14/1997	H / NA	007	NA	01 RCRA permitted unit	YES /

Description from Company: C-720B / Tank evaluated steel sphere, diameter of 26-ft, feed tank for the incinerators.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 0016202H Oxy Vinyls La Porte Chlorinated By-product
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
0251219H VCM Light Ends are generated at the VCM Unit during the purification process. Estimated initial generation date 4Q91.
Wastes Previously Managed at Unit: 0339219H

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
083	Miscellaneous storage containers	ACTIVE	06/03/1997	2 / NA	NA	NA	10 RCRA Permit exempt - Other	YES /

Description from Company: Sand blast area - no lead paints ever used at this site.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 01734902 Sandblasting sand used in daily maintenance activities throughout the plant. Initial date of generation was 06/87.
Wastes Previously Managed at Unit: 01013892 9448203H

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
084	Container storage area	ACTIVE	04/20/1998	1 / NA	NA	NA	13 RCRA Pmt Exempt - Accumulation Time	YES /

Description from Company: Concrete area North of VCM 2 furnaces extending West to OHC 2.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 01513071 Rust/scale that is removed from decontaminated process equipment
0226319H Heavy Ends tank cleaning residue combined with reboiler / exchanger scale.
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
0229407H Reboiler scale produced when carbon builds up on the walls of the reboiler tubes.
02374031 Steam Stripper Packing
0238319H Ethylene dichloride (EDC) contaminated material generated during production & maintenance operations.
0239407H Reboiler scale and VCM furnace coke mixture.
02403191 VCM process area trench material (non-hazardous)
0242303H Incinerator firebox solids from VCM Incinerators F-550 AND F-570.
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
02543061 Limestone sludge is generated during neutralization of HCl generated during incineration of chlorinated organics. The m
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 equipmen
02593192 Rockbox residue generated during clean out and other maintenance activities required at limestone neutralization equipment.
0267407H Incinerator Absorber Solids are generated during maintenance or clean-out of incinerator acid absorber system.
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.
0298393H Spent Catalytic Oxidizer catalyst generated at the VCM Incinerators F-550 and F-570.

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
085	Container storage area	ACTIVE	05/12/1998	2H / NA	NA	NA	13 RCRA Pmt Exempt - Accumulation Time	YES /

Description from Company: Container storage area lo
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 02003192 waste fireproofing material
Wastes Previously Managed at Unit: 0199404H 0450110H

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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
086	Container storage area	ACTIVE	04/06/1999	H / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Container storage located north of EDC wastewater area.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Previously Managed at Unit: 0238319H 0339219H 0494110H

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
087	Container storage area	ACTIVE	06/14/1999	1 / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: concrete pad container storage area located west of VCM storage spheres
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit:
01884061 RCRA empty containers - drums, totes, etc. from industrial water treatment chemicals and oil.
0226319H Heavy Ends tank cleaning residue combined with reboiler / exchanger scale.
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 waterwatertreatment plant operated at this facility.The stream is designated hazardous due to the derived from rule
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
0253306H Limestone sludge is generated during neutralization of HC1 generated during incinceration of chlorinated organics. The material is dewatered and collected in containers. The stream is
02543061 Limestone sludge is generated during neutralization of HCl generated during incineration of chlorinated organics. The m
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 equipmen
02573062 Limestone sludge is generated during neutralization of Hcl generated during incineration of chlorinated organics
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.
0277310H Spent Alumina Desiccant - alumina is used to remove moisture and iron from product VCM in C-702.
0292404H Spent activated carbon used to remove organics from EDC/VCM wastewater.
0294319H Sandfilter Sand
0304319H Rockbox Tank Debris and Solids generated during demolition of tank
0471319H Chlorine process piping and solids are generated during maintenance activities when solids and/or piping are removed from the process
0494110H Organic contaminated cell renewal wastewater.
06233931 SCR removed from Ethylene and VCM furnaces during maintenance or clean-outs for repairs.
Wastes Previously Managed at Unit: 0460319H 9449319H

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
088	Container storage area	INACTIVE	08/26/2003	1 / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Co-gen facility
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Previously Managed at Unit: 91511141 94462191

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
089	Container storage area	ACTIVE	12/01/1999	1H / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Concrete area southeast o
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit:
02403191 VCM process area trench material (non-hazardous)
0243319H Incinerator brick generated when VCM unit incinerators are cleaned out or rebricked.
0258219H Mother Liquor from direct chlorination reactor in the VCM unit.

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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
090	Container storage area	ACTIVE	01/19/2000	2 / NA	NA	NA	05 Non-Hazardous Regulated	YES /

Description from Company: Container storage area for dewatered brine sludge (CCP) trailer.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 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

091	Sump	ACTIVE	03/08/2000	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: Co-Generation East Oil / Water Seperator Sump
System Types: 039 Other recovery or reclamation for reuse including acid regeneration, organics recovery, etc.
Wastes Currently Managed at Unit: 01101141 Co-generation wastewater stream

092	Sump	ACTIVE	03/08/2000	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: Co-Generation West Oil / Water Separator Sump
System Types: 039 Other recovery or reclamation for reuse including acid regeneration, organics recovery, etc.
Wastes Currently Managed at Unit: 01101141 Co-generation wastewater stream

093	Tank	ACTIVE	03/09/2000	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: 56-D-001A Neutralization Tank at Co-gen
System Types: 121 Neutralization only
Wastes Currently Managed at Unit: 01101141 Co-generation wastewater stream

094	Tank	ACTIVE	03/09/2000	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: 56-D-001B Neutralization Tank at Co-gen
System Types: 121 Neutralization only
Wastes Currently Managed at Unit: 01101141 Co-generation wastewater stream

095	Distillation/Solvent recovery unit	ACTIVE	10/30/2000	H / NA	NA	NA	10 RCRA Permit exempt - Other	YES /

Description from Company: Solvent still for the recovery of spent solvents
System Types: 020 Solvents recovery
Wastes Currently Managed at Unit: 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 /

Description from Company: Area east of Cl2 Recovery unit
System Types: 120 Combination of chemical, biological, and/or physical treatment
Wastes Previously Managed at Unit: 0498119H

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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
097	Miscellaneous storage containers	INACTIVE	07/19/2012	H / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Concrete pad at chlorine recovery unit
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Previously Managed at Unit: 9158404H

098	Sump	ACTIVE	07/09/2004	1 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: HCl Dock sump
System Types: 135 Discharge to sewer/POTW or NPDES (with prior storage - with or without treatment)
Wastes Currently Managed at Unit: 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 /

Description from Company: PCE Dock sump
System Types: 135 Discharge to sewer/POTW or NPDES (with prior storage - with or without treatment)
Wastes Currently Managed at Unit: 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 /

Description from Company: Cell Renewal dip tank liquid waste
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 0497105H Spent Cell renewal dip tank solution

101	Container storage area	ACTIVE	01/05/2009	1 / NA	NA	NA	05 Non-Hazardous Regulated	YES /

Description from Company: Roll-off storage area
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 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 /

Description from Company: Concrete area south of Plant 1 Cooling Tower.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.

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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
103	Container storage area	ACTIVE	12/30/2010	1 / NA	NA	NA	05 Non-Hazardous Regulated	YES /

Description from Company: Drum storage area south and west of VCM Drum storage building - Unit 022.

System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.

Wastes Currently Managed at Unit:
01003902 Debris from firebox/furnace repair - fire brick, insulation, soil wooden pallets, etc.; 10/93
01029992 Plant trash from offices and plant production. Includes paper, glass, scrapmetal, plastic, wood, empty containers.
01049022 Supplemental plant production refuse from manufacture of chlorine, caustic soda,ethylene dichloride. This includes metal parts, floor sweepings, and scrap materials. Initial generation
01073101 Clean up of oil and fuel spills. Estimated initial date of generation 1988.
01143191 Cooling tower repairs. Initial generation 1988.
01184091 Waste Permanite Powder from maintenance activities.
01323192 Bead blaster material is generated from the cleaning of the maintenance beadblaster machine which cleans parts.
01412101 Unused epoxy/adhesive that was not used during maintenance, and is no longer needed, and it is out of spec.
01423191 Waste fireproofing from maintenance activities
01734902 Sandblasting sand used in daily maintenance activities throughout the plant. Initial date of generation was 06/87.
01743902 Miscellaneous construction debris generated from improvements and/or repairs toareas throught the plant. Initial date of generation was 06/90.
01764891 Soil generated from the clean-up of a diesel spill from plant machinery. Initial date of generation was 8/94.
01792061 Used oil generated from equipment oil change outs.
01843101 Used oil filters
01853192 Drained, non-PCB electrical equipment (capacitors and transformers)
01863191 Drained, oil-containing equipment removed from service. Oil is drained from equipment.
01873192 Activated alumina used as a desiccant throughout the plant. White ball form.
01914891 HARDENED ASPHALT
01933192 uncontaminated fire brick material from periodic maintenance or turnaroundactivities
01943192 Uncontaminated plastic packing removed during periodic maintenance orturnaround activities
01953192 Uncontaminated fiberglass plastic (FRP) material generated from maintenanceor turnaround activities
01983192 Ceramic packing removed during periodic maintenance or turnaround activities.
02003192 waste fireproofing material
02453931 Unused and spent copper chloride catalyst is generated during periodic catalystchange-outs. Miscellaneous items (plastic, trash, personal protective equipment) used during catalyst
02523192 Wastewater stripper packing. Packing in wastewater trippers must be periodically replaced. Prior to maintenance activities, column (& packing) is decontaminated by steaming until
02704042 Spent activated carbon drums generated during maintenance activities. Drums areused as back-up devices in vacuuming activities. Materials vacuumed are steamcleaned before vacuumin
02713192 Air dryer dessicant from VCM air compressor generated when it becomes spent & replaced with new dessicant. Material is used to dry moisture out of compressed air & never comes in
02903902 nonhaz. construction debris includes concrete,rebar,plywood,soil,plasticinsulation(non-asbestos),steel(pipe,etc)
02962111 Waste polymer generated from wastewater treatment process.
04013901 Demo debris, bricks, dirt, cement from demolition of pads and trenches inprocess areas.
04033111 Asbestos and asbestos contaminated material
04083191 Contaminated nonhazardous inorganic solids are generated during spill clean-up and/or general work activities associated with the chlorine recovery process equipment. Estimated initial
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.
04703191 Chlorine process piping and solids are generated during maintenance activities when solids and/or piping are removed from the process.
04903191 Ceramic saddles from the C/A units generated during maintenance activities
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
05063161 Spent aluminum oxide abrasive is generated when aluminum oxide is used as an abrasive to clean/polish metal equipment or parts.

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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
104	Container storage area	ACTIVE		1 / NA	NA	NA	05 Non-Hazardous Regulated	YES /

Description from Company: Container storage area south of boiler house.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 01884061 RCRA empty containers - drums, totes, etc. from industrial water treatment chemicals and oil.
04122061 Refrigerant-contaminated oil removed from the Chlor-Alkali refrigeration system during maintenance activities

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
105	Container storage area	ACTIVE		2 / NA	NA	NA	05 Non-Hazardous Regulated	YES /

Description from Company: Container storage area east of the Chlor-Alkali wastewater ponds.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 01134092 Waste is generated during the disassembly/demolition or the construction of onsite cooling towers.
02973022 Cooling Tower sludge generated from the clean-out of cooling tower basins
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

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
106	Container storage area	ACTIVE		NA / H12	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Container storage area south of VCM Plant I storm water tanks (D-525A/B)
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 0228491H Dewatered biological treatment sludge (biomass) is generated from the waterwatertreatment plant operated at this facility.The stream is designated hazardous due to the derived from rule
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.
0253306H Limestone sludge is generated during neutralization of HC1 generated during incinceration of chlorinated organics. The material is dewatered and collected in containers. The stream is
02543061 Limestone sludge is generated during neutralization of HCl generated during incineration of chlorinated organics. The m
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 equipmen
02573062 Limestone sludge is generated during neutralization of Hcl generated during incineration of chlorinated organics
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.
0292404H Spent activated carbon used to remove organics from EDC/VCM wastewater.
0294319H Sandfilter Sand
Wastes Previously Managed at Unit: 0460319H

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
107	Container storage area	ACTIVE		NA / H2	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Container storage area east of D-531
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 01734902 Sandblasting sand used in daily maintenance activities throughout the plant. Initial date of generation was 06/87.
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
02403191 VCM process area trench material (non-hazardous)
02573062 Limestone sludge is generated during neutralization of Hcl generated during incineration of chlorinated organics
02593192 Rockbox residue generated during clean out and other maintenance activities required at limestone neutralization equipment.
0267407H Incinerator Absorber Solids are generated during maintenance or clean-out of incinerator acid absorber system.
0276407H Dewatered solids generated from the cleanout of wastewater tanks and piping.
0292404H Spent activated carbon used to remove organics from EDC/VCM wastewater.
0294319H Sandfilter Sand

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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
108	Container storage area	ACTIVE		NA / 1	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Container storage area south of the CVS
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 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.

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
109	Container storage area	ACTIVE		NA / H	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Container storage area adjacent to the 550/570 incinerators
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 02403191 VCM process area trench material (non-hazardous)
0243319H Incinerator brick generated when VCM unit incinerators are cleaned out or rebricked.

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
110	Container storage area	ACTIVE		1 / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Concrete pad adjacent to Cogen CTGs and HRSGs
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 05053071 Cogen HRSG tube residue

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
111	Container storage area	ACTIVE		2 / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Area adjacent to Cogen water treatment building
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 05033192 Ion Exchange Resin

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
112	Container storage area	ACTIVE		1 / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Cogen laydown/maintenance yard
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 01792061 Used oil generated from equipment oil change outs.
05063161 Spent aluminum oxide abrasive is generated when aluminum oxide is used as an abrasive to clean/polish metal equipment or parts.

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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
113	Container storage area	ACTIVE		1 / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Concrete hydroblast pad including North and South elevated pads and two central bays

System Types: 129 Other treatment 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.

Wastes Currently Managed at Unit:
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-containingequipment.
0136206H Waste oil generated during maintanence of pumps or other oil containing equipment.
0180309H Battery changeout
0202211H Waste Gasoline
0226319H Heavy Ends tank cleaning residue combined with reboiler / exchanger scale.
0228491H Dewatered biological treatment sludge (biomass) is generated from the waterwatertreatment plant operated at this facility.The stream is designated hazardous due to the derived from rule
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.
02403191 VCM process area trench material (non-hazardous)
0242303H Incinerator firebox solids from VCM Incinerators F-550 AND F-570.
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
0253306H Limestone sludge is generated during neutralization of HC1 generated during incinceration of chlorinated organics. The material is dewatered and collected in containers. The stream is
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.
0267407H Incinerator Absorber Solids are generated during maintenance or clean-out of incinerator acid absorber system.
0273319H Spent molecular sieve form OHC dryer generated when it becomes spent and is replaced.
0276407H Dewatered solids generated from the cleanout of wastewater tanks and piping.
0277310H Spent Alumina Desiccant - alumina is used to remove moisture and iron from product VCM in C-702.
0289303H Scale from incinerator flue gas caustic wash train. Initial date of generation was 9/19/1996.
0292404H Spent activated carbon used to remove organics from EDC/VCM wastewater.
0294319H Sandfilter Sand
02962111 Waste polymer generated from wastewater treatment process.
0471319H Chlorine process piping and solids are generated during maintenance activities when solids and/or piping are removed from the process
0601201H Methanol & Water
0607319H Trash filtered from plant trenches that gets strained before discharging into the contaminated water storage tank.
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.
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.

Wastes Previously Managed at Unit: 0291407H 0407103H

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
114	Container storage area	ACTIVE	04/02/2014	1H / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Concrete pad West of EDC storage dike

System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.

Wastes Currently Managed at Unit:
02403191 VCM process area trench material (non-hazardous)
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 "derive

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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
115	Container storage area	ACTIVE	06/08/2015	1 / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Concrete area West of C-2210 in VCM Plant 2
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit:
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 waterwatertreatment plant operated at this facility.The stream is designated hazardous due to the derived from rule
02374031 Steam Stripper Packing
02403191 VCM process area trench material (non-hazardous)
02573062 Limestone sludge is generated during neutralization of Hcl generated during incineration of chlorinated organics
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.

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
116	Container storage area	ACTIVE	06/01/2016	1 / NA	NA	NA	05 Non-Hazardous Regulated	YES /

Description from Company: Waste Asbestos Container Storage Area North of Cell Renewal
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 04033111 Asbestos and asbestos contaminated material

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
117	Drip pad	ACTIVE	06/01/2016	1 / NA	NA	NA	05 Non-Hazardous Regulated	YES /

Description from Company: Waste Asbestos Containment Pad Near Press
System Types: 100 Physical treatment only (adsorption/absorption/separation/stripping/dewatering)
Wastes Currently Managed at Unit:
04001131 C/A wastewater from the chlorine-causticprocess areas and stormwater. Estimatedinitial generation 1988.
04033111 Asbestos and asbestos contaminated material

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
118	Miscellaneous storage containers	ACTIVE	12/05/2017	1 / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Ethylene Furnace area; North, South, East, and West; concrete pad.This unit is managed as a less than 90 day unit.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit:
05033192 Ion Exchange Resin
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.
06063041 Waste Generated on November 6, 2018.Coke from inside Ethane Cracking Furnace collected during cleaning.
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.
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
06143041 Coke from inside ethane cracking furnace coils that had spalled off and was collected in coke catcher during normal operations, and contains moisture.
06233931 SCR removed from Ethylene and VCM furnaces during maintenance or clean-outs for repairs.
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
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
06383102 Filter socks used to screen process wastewater going into trenches to collect and filter debris and process waste.
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.
0641319H PPE that was used to remove coke fines that filtered through G-4210 A/B strainer and were removed to remove pluggage.

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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
119	Miscellaneous storage containers	ACTIVE	12/05/2017	12 / NA	NA	NA	05 Non-Hazardous Regulated	YES /

Description from Company: Ethylene D-4642A Boiler Feed Water area, south east side, gravel area.This unit is managed as a less than 90 day unit.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 06001131 Ethylene commissioning cleaning solution.
06103192 During the process of regeneration of the ION Exchange vessels, Calcium Sulfate is formed in the effluent of the Cation Beds. High Concentrations of Calcium is removed from the Cation
06113192 During the process of regeneration of the ION Exchange vessels, Calcium Sulfate is formed in the effluent of the Cation Beds. High Concentrations of Calcium is removed from the Cation

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
120	Miscellaneous storage containers	ACTIVE	12/05/2017	1 / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Ethylene area between Furnaces and Thermal Oxidizers, north of breathing air storage, gravel area.This WMU is managed as a less than 90 day unit.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 05033192 Ion Exchange Resin
06023101 V-4240 Spent Filters and Coalescers
06063041 Waste Generated on November 6, 2018.Coke from inside Ethane Cracking Furnace collected during cleaning.
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.
06103192 During the process of regeneration of the ION Exchange vessels, Calcium Sulfate is formed in the effluent of the Cation Beds. High Concentrations of Calcium is removed from the Cation
06113192 During the process of regeneration of the ION Exchange vessels, Calcium Sulfate is formed in the effluent of the Cation Beds. High Concentrations of Calcium is removed from the Cation
06143041 Coke from inside ethane cracking furnace coils that had spalled off and was collected in coke catcher during normal operations, and contains moisture.
06393102 Fuel Filters removed from service equipment during maintenance for clean-outs or repairs.

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
121	Miscellaneous storage containers	ACTIVE	12/05/2017	12 / NA	NA	NA	05 Non-Hazardous Regulated	YES /

Description from Company: Ethy V-4570 Thermal Oxidizer area, north and south side, gravel area
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 06001131 Ethylene commissioning cleaning solution.
06203192 Refractory removed from Ethylene thermal oxidizers during maintenance or clean-outs for repairs.

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
122	Miscellaneous storage containers	ACTIVE	12/05/2017	12 / NA	NA	NA	05 Non-Hazardous Regulated	YES /

Description from Company: Ethy C-4640 LP Condensate Flash Drum and E-4210 Ethane Feed Pre-heater area, west side, concrete pad
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 06001131 Ethylene commissioning cleaning solution.
06363192 E-4211 saturator circulation heater A & B were removed from service to remove pluggage. The waste generated is NORM positive.

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
123	Miscellaneous storage containers	ACTIVE	12/05/2017	1 / NA	NA	NA	05 Non-Hazardous Regulated	YES /

Description from Company: Ethy E-4341A/B Ethylene Fractionator Reboiler area, west side, concrete pad
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 06001131 Ethylene commissioning cleaning solution.

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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
124	Miscellaneous storage containers	INACTIVE	04/13/2022	1 / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Ethy Tent #1 area, south west corner, concrete pad

System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.

Wastes Previously Managed at Unit: 0106489H 01073101 0117211H 0133409H 0136206H 01843101 02713192 0601201H 06023101 06053041 0607319H 06083192 0609393H 06123191 07023101 08002071 08012011 08022011 08033192

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
125	Miscellaneous storage containers	ACTIVE	12/05/2017	1 / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Ethylene Tent #2 area, south east corner, concrete pad.This WMU is managed as a less than 90 day unit.

System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.

Wastes Currently Managed at Unit:
0106489H Clean up of fuel / lubrication oil spills, leaks, and drips
01073101 Clean up of oil and fuel spills. Estimated initial date of generation 1988.
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
0136206H Waste oil generated during maintanence of pumps or other oil containing equipment.
01843101 Used oil filters
0202211H Waste Gasoline
02713192 Air dryer dessicant from VCM air compressor generated when it becomes spent & replaced with new dessicant. Material is used to dry moisture out of compressed air & never comes in
0601201H Methanol & Water
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.
0607319H Trash filtered from plant trenches that gets strained before discharging into the contaminated water storage tank.
06083192 Dirt, trash and PPE that was generated while cleaning out trenches in the Ethylene unit._____
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.
06123191 Waste generated while cleaning out the contaminated water stripper tank due to fouling of the tank.
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.
06163192 The waste is generated after steam cleaning and hydro blasting the debutanizer reboiler A&B.
0617219H Waste is from Ethylene Caustic Tanks where caustic is used to scrub out sulfides after furnace cracking.
06183191 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 fee
0619489H PPE and Rags used to clean drums and equipment while unused wash oil is recovered during off loading into the wash oil tank.
06203192 Refractory removed from Ethylene thermal oxidizers during maintenance or clean-outs for repairs.
06213192 Insulation that was contaminated in the P3 binary area.
06223191 Prior to shutting unit down, caustic tanks are drained and flushed clean with boiler feed water.
06243102 MOLSIVE/DENSTONE WAS USED IN C-4281 A&B DRYERS TO REMOVE RESIDUAL MOISTURE FROM ETHYLENE.
0631310H Filter socks used to screen process wastewater into trenches to collect and filter debris and process waste water.
07023101 Spent Filters from Ethylene Pipeline
08002071 Waste is biocide used during commission.
08012011 Waste name is PC-45.
08022011 Waste Name is CW-1007.
08033192 New Unused refractory mortar.
0804201H 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 bacl

Wastes Previously Managed at Unit: 07044041

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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
126	Miscellaneous storage containers	ACTIVE	12/05/2017	2H / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Ethy E-4360 Propylene Refrigerant Condenser area, east side, concrete pad
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 0601201H Methanol & Water
0631310H Filter socks used to screen process wastewater into trenches to collect and filter debris and process waste water.
06333102 Activated carbon used to screen process wastewater to purify the process wastewater.

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
127	Container storage area	ACTIVE	08/02/2018	2 / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Spent Abrasive Media: Sandblasting Sand
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 01734902 Sandblasting sand used in daily maintenance activities throughout the plant. Initial date of generation was 06/87.

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
128	Miscellaneous storage containers	ACTIVE	08/30/2018	1 / NA	NA	NA	05 Non-Hazardous Regulated	YES /

Description from Company: Used Oil, Used Antifreeze: CA Concrete Pad S. End of old boiler house.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 01073101 Clean up of oil and fuel spills. Estimated initial date of generation 1988.
01372962 Waste Antifreeze
01764891 Soil generated from the clean-up of a diesel spill from plant machinery. Initial date of generation was 8/94.
01792061 Used oil generated from equipment oil change outs.
01843101 Used oil filters
Wastes Previously Managed at Unit: 0136206H 0177205H

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
129	Waste pile	ACTIVE	04/05/2022	2 / NA	NA	NA	05 Non-Hazardous Regulated	YES /

Description from Company: Rockbox residue stockpile placed on concrete pad north of VCM 2 furnaces. Generated annually during Rockbox outages.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 02593192 Rockbox residue generated during clean out and other maintenance activities required at limestone neutralization equipment.

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
130	Miscellaneous storage containers	ACTIVE	10/30/2023	12 / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Area west of the multi point ground flare and east of 2nd street.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 06023101 V-4240 Spent Filters and Coalescers
06243102 MOLSIVE/DENSTONE WAS USED IN C-4281 A&B DRYERS TO REMOVE RESIDUAL MOISTURE FROM ETHYLENE.
06253102 The molsive/denstone was used in C-4335 Ethylene Dryer to remove residual moisture from ethylene. Dryers were steamed cleaned prior to opening.
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
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
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
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.
06333102 Activated carbon used to screen process wastewater to purify the process wastewater.
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.

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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
131	Miscellaneous storage containers	ACTIVE	10/30/2023	2H / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Area east of cold box and west of 3.25 street.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 0601201H Methanol & Water
06333102 Activated carbon used to screen process wastewater to purify the process wastewater.

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
132	Miscellaneous storage containers	ACTIVE	10/30/2023	2 / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Area next to C3/C4 truck loading.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 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.

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
133	Miscellaneous storage containers	ACTIVE	10/30/2023	2 / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Area southwest corner C3/C4 Truck loading.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 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 trenchs around the hydro
06333102 Activated carbon used to screen process wastewater to purify the process wastewater.
0635319H Coke fines that filtered through G-4210 A/B strainer and were removed to remove pluggage.The waste generated is NORM positive.
06363192 E-4211 saturator circulation heater A & B were removed from service to remove pluggage. The waste generated is NORM positive.
06373192 Solids from the E-4321 Deethanizer which was removed from service during maintenance/shutdown work.
06383102 Filter socks used to screen process wastewater going into trenches to collect and filter debris and process waste.
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.

As of 04/08/2025, The next unassigned sequence number for UNITS is 134

Attachment X.

Air Emission Standards

Table X.C. - Tanks, Surface Impoundments, and Containers Subject to Air Emission Controls

List all units covered by this application

Permit Unit No.	Tanks	Design Capacity (Cubic Meters)	Hazardous Waste Maximum Organic Vapor Pressure[1] (Kilopascals)	Tank Used in Waste Stabilization Process (Y, N)	Tank Level Control (1, 2)[2]	Identify Tank Level 2 Control Tank Type and Control Device Type[3]
5	C-720A	246	130.3	N	2	Incinerator
	C-720B	246	130.3	N	2	Incinerator

Permit Unit No.	Surface Impoundments	Control Type (Floating Membrane/ Cover Vented through Closed Vent System to Control Device)[3]

Permit Unit No.	Surface Impoundments	Control Type (Floating Membrane/ Cover Vented through Closed Vent System to Control Device)[3]

Permit Unit No.	Container Storage Areas	Container Design Capacity (Cubic Meters)	In Light Material Service? (Y/N)	Container Level Standard[2](1,2,3)	Container Level Standard 3 Control Types (Closed-Vent System/ Enclosure, Control Device Type)[3]
5	VCM	35	Yes	1	No

1. Applicable to Tank Level 1 controls determined using procedures in 40 CFR 264.1083(c). If the tank is heated, see 40 CFR 264.1084(b)(ii).
2. See 40 CFR 264.1084(c) and (d) for tanks and 40 CFR 264.1086(b) for containers.
3. See 40 CFR 264.1084(d)(1)-(5) for tanks, 40 CFR 264.1087(c)(1) for control devices, 40 CFR 264.1085(b) for surface impoundments, and 40 CFR 264.1086(c), (d), and (e) for containers.

Attachment X.A

Air Emission Standards

OxyChem
Ingleside, Texas

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Appendices

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1.0 Introduction

This report is provided to provide information on compliance with RCRA air emission standards for the OxyChem facility in Ingleside, Texas. As specified in the regulations, the three major RCRA air emission standards address the following:

- Process Vents (40 CFR Part 264, Subpart AA);
- Equipment Leaks (40 CFR Part 264, Subpart BB); and
- Tanks, Surface Impoundments, and Containers (40 CFR Part 264, Subpart CC).

The facility has RCRA-regulated units (tanks and container storage areas) that are subject to these requirements. OxyChem has implemented a leak detection and repair (LDAR) program for air emissions under RCRA regulations found in 40 CFR Part 264, Subparts BB and CC. It should be noted that the facility does not have process vents. As such, 40 CFR Part 264, Subpart AA requirements are not applicable.

The following sections detail compliance with each of these standards for active units at the facility subject to 40 CFR Part 270 permitting standards. This report details the requirements specified for Subparts BB and CC under RCRA; however, those regulations allow for compliance with these standards using equivalent or more restrictive standards under the Clean Air Act programs. At the OxyChem facility, these are primarily addressed through adherence to Hazardous Organic NESHAP (HON) programs with the requirements of 40 CFR Part 63, Subpart H being the primary program. Air emissions from these units are authorized by Texas Commission on Environmental Quality (TCEQ) via provisions in issued permits/permits-by-rule from TCEQ's Office of Air.

2.0 Process Vents (Subpart AA)

There are no process vents in hazardous waste service at the facility, as defined in 40 CFR Part 264 Subpart AA; therefore, the requirements of 40 CFR 264.1030 – 264.1036 are not addressed in this report.

3.0 Equipment Leaks (Subpart BB)

OxyChem has units subject to 40 CFR Part 264, Subpart BB, which applies to equipment leaks from equipment in service with hazardous waste having an organic concentration of 10% or greater. Equipment subject to permitting standards and Subpart BB at the facility consists of ancillary equipment associated with RCRA storage tanks. The following is a list of the sections of 40 CFR Part 264, Subpart BB and associated information regarding compliance procedures for the facility. Also, the certification statement required by Section X.B of the TCEQ application form and the Subpart BB regulations is provided as Appendix A.

In addition to information provided in this Air Emissions Report, further information on Subpart BB is provided in the individual tank reports submitted as part of this application (i.e., Attachments V.C.1 and V.C.2).

3.1 Subpart BB Requirements for Ancillary Equipment

For RCRA tank systems handling hazardous wastes having an organic concentration of 10% or greater, the following equipment is subject to the requirements of 40 CFR Part 264, Subpart BB:

- Pumps;
- Compressors;
- Valves;
- Pressure relief devices;
- Sampling connection systems;
- Open-ended lines;
- Flanges and other connectors; and
- Closed vent systems and control devices used to comply with Subpart CC requirements.

Equipment subject to Subpart BB at the facility may be considered to be in light liquid service or heavy liquid service. As such, the more restrictive monitoring for equipment in light liquid service, which is reflected by the methods in 40 CFR 264.1063(b), will be used. Subpart BB requirements vary by type and service for each component. Many of the requirements relate to inspection and monitoring, and options are provided depending on the type of equipment in place. In the case of pumps and valves in light liquid service and valves in gas service,

OxyChem may designate the equipment for no detectable emissions, and practice specific recordkeeping and monitoring as described in Section 3.3.

Pumps

Pumps in light liquid service have the option of complying with specific inspection requirements (visual inspection on a weekly basis for indications of liquids dripping from the pump seal, monthly monitoring to detect leaks), or of incorporating specified design features. Optional design features include a dual mechanical seal system incorporating a barrier fluid system, and closed-vent systems capable of capturing and transporting leakage from pump seals to a control device. Pumps designated for no detectable emissions have an absence of externally actuated shafts penetrating the pump housing. The rules also provide for inspection requirements specific to each design feature.

Pumps in light liquid service not equipped with dual mechanical seals or vented to closed vent systems are monitored monthly using Reference Method 21 for organic emissions greater than 10,000 ppm, and visual inspections are performed on a weekly basis. Those pumps protected by dual mechanical seals with barrier fluids are also visually inspected on a weekly basis, and have barrier fluid sensors which are either checked daily or alarmed (alarms are checked monthly). Those pumps which are designated for no detectable emissions are tested upon designation, and annually thereafter, to demonstrate that emissions are less than 500 ppm (using Method 21) above background.

If a leak is found, repair activities and recordkeeping take place as described below. Inspection requirements are described in Section 3.4.

Pressure Relief Devices

Pressure relief devices in gas/vapor service have specific operational and inspection requirements unless they are equipped with a closed-vent system capable of capturing and transporting leakage to a control device. Pressure relief devices in light liquid service have monitoring and repair requirements under Subpart BB.

Those pressure relief devices in gas/vapor service which are not equipped with closed-vent systems are maintained in a condition of no detectable emissions. This is demonstrated by testing to verify an instrument reading of less than 500 ppm (using Method 21) within 5 days after each pressure release.

Pressure relief devices in liquid service are tested for emissions greater than 10,000 ppm if visual, audible, or olfactory evidence of a potential leak is found. If a leak is found, repair activities and recordkeeping take place as described below.

Sampling Connection Systems

Sampling connection systems are equipped with closed-purge, closed-loop, or closed-vent systems unless the sampling is done in-situ or without purges. Purged process fluids are returned directly to the process line, collected and recycled, or transported to a waste management unit or a control device.

Open-Ended Valves or Lines

Open-ended valves or lines are equipped with caps, blind flanges, plugs, or second-valves which seal the open end when not operational. A cap, blind flange, plug, or second valve seals the open end except during operations requiring flow through the open-ended valve or line, except when a double block and bleed system is being used. When a second valve is used, it is operated so that the valve on the hazardous waste stream end is closed before the second valve is closed.

Valves in Gas/Vapor Service or in Light Liquid Service

In general, Subpart BB requirements for valves in gas/vapor service or in light liquid service relate to monitoring and repair, as discussed below. Valves designated for no detectable emissions are designed with no external actuating mechanism in contact with the hazardous waste stream. Following installation or repair, valves in gas/vapor service or in light liquid service are monitored monthly to detect leaks using Method 21, as indicated by an instrument reading of 10,000 ppm or greater. For a given valve, after two consecutive months with no leaks detected, a quarterly monitoring frequency is adopted.

Under skip period leak detection and repair (40 CFR 264.1062), after two consecutive quarterly leak detection periods with no more than 2% of the valves found to be leaking, OxyChem may begin to skip one of the quarterly leak detection periods. After five consecutive quarterly leak detection periods with no more than 2% of the valves found leaking, the facility may skip three of the quarterly leak detection periods.

Under percentage of valves allowed to fail (40 CFR 264.1061), valves in gas/vapor or light liquid service in the unit are monitored within one week of each other. If leaks are detected in no more than 2% of the valves, then further monitoring may take place on an annual basis.

Specific valves in gas/vapor or light liquid service may also be designated as unsafe-to-monitor, or difficult-to-monitor, based on the location of the valve or potential dangers of monitoring. These valves are not subject to the above monitoring requirements. Each unsafe-to-monitor valve is sampled as frequently as practicable during safe-to-monitor times, as described in a written plan. Each difficult-to-monitor valve is monitored at least once/calendar year, as described in a written plan. A list of the valves labeled unsafe or difficult to monitor must be recorded in the operating record, along with the justification for the designation.

If a valve is found to be leaking, repair activities and recordkeeping take place as described below.

Valves designated for no detectable emissions are tested upon designation, and annually thereafter, to demonstrate an instrument reading (using Method 21) of less than 500 ppm above background.

Flanges and Other Connectors

Flanges and other connectors are subject to Subpart BB requirements on monitoring and repair, as discussed below. Ceramic or ceramic-lined connectors are exempt from monitoring and recordkeeping. Accessible, non-ceramic flanges and other connectors are tested for an instrument reading (using Method 21) greater than 10,000 ppm if visual, audible, or olfactory evidence of a potential leak is found. If a leak is found, repair activities and recordkeeping take place as described below. Ceramic, ceramic-lined, and inaccessible connectors are exempt from monitoring and recordkeeping.

3.2 Repair Activities

When a leak is detected as specified above, repair will be initiated within 5 days, unless it is technically infeasible without a hazardous waste management unit shutdown. Repairs should be completed no later than 15 calendar days after detection.

Repairs may be delayed if the repair is technically infeasible without a hazardous waste management unit shutdown, or if the equipment can be isolated from the hazardous waste management unit and not contact hazardous waste containing at least 10% by weight organics. In addition, delay of repair for valves may be allowed if it is determined that repair will result in emissions greater than those likely to occur due to delay of repair, and for pumps if repair requires the use of a dual mechanical seal system that includes a barrier fluid system.

If a repair is delayed, it must be completed during the next waste management unit shutdown, unless the equipment is a valve needing unavailable valve assembly replacement. In this case, the next unit shutdown must occur within six months.

For pumps and pressure relief devices in liquid service, compressors, valves in light liquid or gas/vapor service, and flanges and connectors found leaking, the following must occur:

- Tag the equipment until repaired.
- Record the equipment identification number, the operator and instrument discovering the leak, and date the potential leak or leaks were discovered.
- Record the date of each repair attempt, including repair methods and success or failure of each attempt.

If a repair is delayed, record the reason for the delay if a leak is not repaired within 15 days, and provide documentation supporting the delay of repair, the expected date of successful repair, and a signature or electronic version of a signature of the person responsible for determining that the repair must be delayed.

OxyChem must report to TCEQ on a semi-annual basis equipment not repaired as required in Subpart BB.

3.3 No Detectable Emissions

Pumps in light liquid service, compressors, and valves in light liquid or gas/vapor service may be designated for no detectable emissions if Method 21 testing indicates less than 500 ppm organics above background. This allows the facility to monitor annually for this equipment. Pressure relief devices in gas/vapor service must be demonstrated for no detectable emissions within five days following a pressure release.

3.4 Monitoring, Recordkeeping, and Reporting

As described, Subpart BB includes monitoring, recordkeeping, and reporting requirements in addition to design requirements. Requirements vary by type of component and compliance option selected. For equipment subject to Subpart BB requirements, the following will be recorded in the operating record:

- Equipment type, identification number, and location;

- Percent-by-weight total organics and physical state of the hazardous waste stream at the equipment; and
- Method of compliance with the standard.

Appendix B reflects the monitoring schedule for Subpart BB equipment at the facility.

3.5 Other Information

A list of identification numbers for equipment designated as no detectable emissions, and a list of pressure relief devices in gas/vapor service, is recorded as part of the facility operating record, along with the dates, instrument readings, and background measurement of each compliance test. Tables that identify equipment types, identification numbers, etc. (e.g., Table X.B of the TCEQ Part B application form) have been prepared for each tank system in service. These tables are maintained at the facility as part of the LDAR program for each storage tank system subject to Subpart BB requirements prior to placement of that tank system into operation.

As equipment is replaced, it will be tracked as part of the ongoing LDAR program and not updated as part of the permit application process (e.g., a modification application will not be submitted to update an individual attachment in an individual report for replacement of a valve). Instead, a current listing of specific equipment subject to Subpart BB is maintained at the facility.

4.0 Tanks, Surface Impoundments, and Containers (Subpart CC)

The requirements of 40 CFR Part 264, Subpart CC require a facility to control air emissions from RCRA containers, tanks, and surface impoundments having hazardous waste with a volatile organic (VO) concentration of 500 ppm or greater. OxyChem does not have active surface impoundments. As such, the requirements for Subpart CC surface impoundments are not discussed in this report. As provided by the Subpart CC regulations, they do not apply to certain situations such as:

- Containers less than or equal to 0.1 cubic meters;
- Tanks undergoing closure;
- Waste management units used solely for treatment and/or placement of corrective action waste; and
- Waste management units that the facility certifies are equipped and operated per 40 CFR Part 60, 61, or 63.

Provided that the units do not meet one of the above exemptions, requirements for containers and tanks at the facility are as described in the following sections. Also, the certification statements required by Section X.C of the TCEQ application form and the Subpart CC regulations is provided as Appendix C.

In addition to information provided in this Air Emissions Report, further information on Subpart CC is provided in the individual technical reports submitted as part of this application (e.g., Attachments V.B.1, V.C.1, and V.C.2).

4.1 Subpart CC Requirements for Containers

In order to comply with the requirements of 40 CFR 264.1080 - 264.1091 (Subpart CC), RCRA systems must control emissions having a volatile organic (VO) concentration of 500 parts/million (ppm) or greater. Under these requirements, containers are subject to Container Level 2 or Level 1 standards listed in 40 CFR 264.1086, unless they are exempt from Subpart CC per the previously mentioned situations.

Container Level 2 Standards

Containers storing hazardous waste are subject to Level 2 standards if they:

- Have a VO concentration of greater than 500 parts/million by weight (ppmw) at the point of origination;
- Have a design capacity greater than 119 gal.; and
- Are used in light material service. Waste meets the definition of light material service if at least 20% (by weight) of the pure components in the waste have a vapor pressure greater than 0.3 kPa (0.043 psi) at 20°C.

A Level 2 container must be one of the following:

- Option 1 - Meets applicable Department of Transportation (DOT) regulations on packaging hazardous materials for transportation (including DOT-exempt lab packs);
- Option 2 - Operates with no detectable organic emissions; or
- Option 3 - Demonstrates within the preceding 12 months to be vapor-tight using Method 27 of 40 CFR Part 60.

Hazardous waste transfers to or from a Level 2 container are accomplished using procedures that minimize exposure of hazardous waste to the atmosphere.

Container Level 1 Standards

Containers are subject to Container Level 1 Standards in accordance with Subpart CC if they:

- Store hazardous wastes having a VO concentration of greater than 500 ppmw at the point of origination;
- Have a design capacity greater than 26 gal.; and
- Are not subject to Level 2 Standards.

A Level 1 container must be one of the following:

- Option 1 - Meets applicable DOT regulations on packaging hazardous materials for transportation (including DOT-exempt lab packs).
- Option 2 - Equipped with a cover and closure devices that form a continuous barrier over the container openings such that there are no visible holes, gaps, or other open spaces into the interior of the container. The cover may be a separate cover installed on the container or an integral part of the container.
- Option 3 - Is an open-top container with a vapor-suppressing barrier on or over the hazardous waste such that hazardous waste is not exposed to the atmosphere.

Cover and closure devices, as applicable, must be composed of suitable materials to minimize exposure of hazardous waste to the atmosphere while maintaining equipment integrity throughout its service life. OxyChem considers the following factors when selecting materials for and designing the cover and closure devices:

- Organic-vapor permeability;
- Effects of contact with the hazardous waste or its vapor managed in the container;
- Effects of exposure to wind, moisture, and sunlight; and
- Operating practices.

Pressure Relief Devices

Containers may use pressure relief devices that vent to the atmosphere during normal operating conditions if necessary to maintain design specifications. Devices will be designed to operate with no detectable organic emissions when closed. Settings for pressure relief are established based on manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, and other requirements for safe handling of flammable, combustible, explosive, reactive, or hazardous materials.

4.2 Subpart CC Requirements for Tanks

RCRA tank systems subject to Subpart CC requirements (40 CFR 264.1080 - 264.1091) must control emissions from waste having VO concentrations of 500 parts/million (ppm) or greater. Per these requirements, air emission controls for tanks may be accomplished using Level 1 or Level 2 controls. This section describes the requirements for these emission controls. Tanks subject to Level 1 controls are those that meet the following criteria:

- Hazardous waste in the tank has a maximum organic vapor pressure that is less than the following:
  - 5.2 kPa for tanks with a design capacity $\geq 151 m^3$;
  - 27.6 kPa for tanks with a design capacity between $75 m^3$ and $151 m^3$; or
  - 76.6 kPa for tanks $<75 m^3$.
- Hazardous waste in the tank is not heated such that the vapor pressures above are exceeded; and
- Hazardous waste is not treated by a stabilization process.

Tanks meeting Level 1 controls at the facility meet the requirements specified in 264.1084(c)(1) through (c)(4). In general, these requirements consist of the following:

- A determination of maximum organic vapor pressure for the waste is made per 264.1083(c). This determination is repeated when significant changes to the waste occur that could increase the maximum pressure.
- The tank is equipped with a fixed roof that achieves the following:
  - Forms a continuous barrier;
  - Has no holes, gaps, etc.;
  - Openings in the tank are either equipped with an effective closure device or routed to closed vent system with associated control device;
  - Roof and closure devices are of a suitable material to minimize exposure of the waste to the atmosphere;
- Closure device is in the closed position except during tank maintenance activities; and
- Inspections of the air emission control equipment are performed.

Tanks not meeting the above criteria for Level 1 controls must meet the requirements for Level 2 controls. Level 2 controls are accomplished using one of the following per the regulations noted below:

- Fixed roof tank with internal floating roof [264.1084(e)];
- Fixed roof tank with external floating roof [264.1084(f)];
- Tank venting to a control device [264.1084(g)];
- Pressure tank [264.1084(h)]; and
- Tank using a closed vent system [264.1084(i)].

OxyChem performs required inspection and monitoring of tanks subject to Subpart CC. Information regarding these inspections is provided in the individual tank technical reports provided as Attachments V.C.1 and V.C.2. As part of the facility operating record the tank information required by 40 CFR 264.1089 is maintained for a minimum of three years.

Appendix A

Subpart BB Certification Statement

Subpart BB Certification Statement

I, TODD BEHNE, certify that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur.

I further certify that the control device is designed to operate at an efficiency of 95 weight percent or greater.

T. J Behne
(Signature)

8/11/2025
(Date)

Appendix B

Subpart BB Monitoring Schedule

Subpart BB Monitoring Schedule

Equipment – Service	Option	Component	Monitoring/Leak Detection	Frequency
Pumps - LLS	Pumps with dual seal and sensor	Pump	AVO for leaks	Weekly
		Sensors (no alarms)	Check sensor	Daily
		Sensor alarms	Check alarm	Monthly
	Pump with single seal	Pump	AVO for leaks	Weekly
			Monitor (10,000 ppm)	Monthly
	NDE	Pump	Monitor (500 ppm)	Annually
Valves – G/VS, LLS	Leak detection and repair	Valve	Monitor (10,000 ppm)	Quarterly
	Percentage of valves allowed to leak	Valve	Monitor valves within one week and if % leaking is 2% or less repeat test annually	Annually
	Skip period	Valve	If 2% or less leaking for two consecutive quarters, skip one quarter per year	Quarterly and skip one quarter per year[1]
	NDE	Valve	Organic emissions less than 500 ppm	Annually
Unsafe to Monitor Valves – G/VS, LLS	N/A	Valve	Monitor (10,000 ppm)	Per plan (when safe)
Difficult to Monitor Valves – G/VS, LLS	N/A	Valve	Monitor (10,000 ppm)	Annually
Accessible, non-ceramic flanges and connectors	N/A	Connector	Monitor (10,000 ppm)	Within 5 days of AVO evidence of leak

Subpart BB Monitoring Schedule (continued)

Equipment – Service	Option	Component	Monitoring/Leak Detection	Frequency
CVS	NDE	CVS under negative pressure	Monitor (500 ppm)	Initial
		Hard-piped CVS	Monitor (500 ppm)	Initial
		Ductwork	Monitor (500 ppm)	Annual

AVO – Audible/visual/olfactory observation
CVS – Closed vent system/control device
G/VS – Gas/vapor service
LLS – Light liquid service
NDE – Designated no detectable emissions

[1] Valves monitored quarterly must be monitored in first month of quarter

Appendix C

Subpart CC Certification Statements

Subpart CC Certification Statements

I, Todd Behne, certify that the requirements of 40 CFR Part 264, Subpart CC, are met for all containers subject to control.

T. J. B. 8/11/2025

(Signature) (Date)

I, Todd Behne, certify that the control device is designed to operate at the performance level documented by a design analysis as specified in 40 CFR 264.1089(e)(1)(ii) or by performance tests as specified in 40 CFR 264.1089(e)(1)(iii) when the tank, surface impoundment, or container is or would be operating at capacity or the highest level reasonably expected to occur.

T. J. B. 8/11/2025

(Signature) (Date)

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

Table XII.A. – Hazardous Waste Units (For Application Fee Calculations)

Verbal Description of Unit	Rated Capacity	Surface Acreage[1]	# of Unit Types[2]	Identical Unit Justification[3]
VCM Container Storage Area	9,240 gallons	0.020	1	N/A
Tank C-720A	65,000 gallons	0.129	1	N/A
Tank C-720B	65,000 gallons	0.129	0	Same material, design, size, waste, and management characteristic (storage)
Furnace CCIN-1	5,500 lb/hr	0.015	1	N/A
Furnace CCIN-2	5,500 lb/hr	0.015	1	N/A
		Total[4] 0.308	Total[4] 4	

1. Number of calculated acres.
2. Enter number of units except for units identical in type and use which only count toward a single $500.00 fee.
3. Explain justification for any units claimed as identical in type and use.
4. Enter totals on the worksheet.

Table XII.B. - Hazardous Waste Permit Application Fee Worksheet

Name of Facility: Occidental Chemical Corporation

Solid Waste Registration Number: 38280

1. Process Analysis - $1,000..... $ 1,000.00
2. Facility Management Analysis - $500..... $ 500.00
3. Unit Analysis - 4 units @ $500 per unit..... $ 2,000.00
4. Site Evaluation - 0.308 acres @ $100 per acre..... $
   (Maximum of 300 acres)
5. Minor amendment, Class 1, or Class 1[1] modification - $100..... $ 100.00
6. Cost of Providing Notice - $50 (+ $15 for a renewal)..... $ 65.00

Pay This Amount **Total** $ 3,695.80

Pay Online through ePay portal [redacted]

Enter ePay Trace Number: _____

For Payment by check, make checks Payable To:

Texas Commission on Environmental Quality - Fund 549
(your canceled check will be your receipt)

Complete And Return With Payment To:

Texas Commission on Environmental Quality
Financial Administration Division - MC 214
P.O. BOX 13088
Austin, Texas 78711-3088

The applicant's fees are subject to evaluation by the technical staff of the Texas Commission on Environmental Quality (TCEQ). However, the TCEQ reserves the right to assess further fees as may be necessitated.

Please do not submit a photocopy of the check (or equivalent transaction submittal) with your application packet but provide only the following account information:

Check No.	Date of Check	Check Amount
7881 and 7883	8/10/2025 and 8/19/2025	$3,595.80 and $100.00

Attachment XIII.

Confidential Material

Confidential Material

No confidential information is being included in this permit application.