AECOM
248 Chapman Road
Suite 101
Newark, DE 19702
USA
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January 30, 2025

Ms. Kelly Keel
Executive Director
Texas Commission on Environmental Quality
Attention: Industrial and Hazardous Waste Permits Section, MC 130
Waste Permits Division
P.O. Box 13087
Austin, Texas 78711-3087

VIA EMAIL

Subject: Response to Technical Notice of Deficiency 1
Pasadena Refining System, Inc. – Pasadena, Harris County
Hazardous Waste Permit No. 50112
Industrial Solid Waste Registration No. 30311
EPA Identification No. TXD008091290
RN100716661/ CN603137605
Tracking No. 30191241

Dear Ms. Keel:

Pasadena Refining System, Inc. (PRSI) submitted a permit renewal application on October 1, 2024 for the PRSI Refinery in Pasadena, Harris County, Texas. The revisions provided herein were developed in response to Technical Notice of Deficiency (NOD) 1 issued to PRSI in an email dated December 17, 2024. Replacement pages that incorporate the TCEQ's requested revisions are enclosed with this letter. TCEQ comments are presented below in italics followed by PRSI's response and references to replacement pages/ information.

TCEQ Comment #NT1:

Section I - General Information, Part A; Table I- General Information, Part B. Clarify if the public can reach out to both Joe Ebert and Steph Seewald at the provided email address: [redacted]

Response: This is correct. Joe Ebert and Steph Seewald, along with other members of the site environmental staff, use this email account for communications with the public.

TCEQ Comment #NT2:

Section XII, Table XII.B. Additional $500 required for the Bauxite Pond as the Moat and Bauxite Pond are not closed as one unit.

> **Response:** The fee calculation provided is consistent with previous applications and indicates the Bauxite Pond and the Moat are identical in type and use. Both units are certified closed (surface impoundments closed as landfills). The permitted units are identical in that the post-closure plan for the units is the same. Therefore, the units are subject to a single $500 unit fee. Based on this reasoning, PRSI respectfully asserts that the correct fee has been remitted.

TCEQ Comment #T1:

Section II.F.1: Revise Section Site Selection II.F. to indicate the parts of the facility may be in 100-year flood plain but the WMU's are not in 100-year flood plain. While the Waste Management Units are not in 100-year flood plain, but part of the facility may be in 100-year flood plain.

> **Response:** This section has been updated as requested. The revised page replaces Page 178 of the original application pdf.

TCEQ Comment #T2:

Appendix II – FEMA Flood Map: Revise FEMA flood map to delineate the facility boundary.

> **Response:** The map has been revised as requested and replaces Page 308 of the original application pdf.

TCEQ Comment #T3:

Appendix III.C, Security Plan: Revise total facility acreage to 46 for it to be consistent with Section I Part B.

> **Response:** Section 1.0 of the Security Plan has been updated with the correct acreage for the Refinery (331 acres) and to include the total acreage number of 462 acres, consistent with Section I Part B. The revision date on the Security Plan title page has been updated to January 2025. The revisions replace pages 352 and 354 of the original application pdf.

TCEQ Comment #T4:

Section III.E: Revise to add a sentence "A copy of the integrated contingency plan is maintained in the operating record and is made is available to local authorities and will be provided to TCEQ upon request".

> **Response:** Section III.E has been updated as requested. The revision replaces page 182 of the original application pdf.

TCEQ Comment #T5:

Appendix III.E, Section 3.1.5: Revise to add a sentence "They will immediately notify TCEQ or the National Response Center (using their 24-hour toll free number 800/424-8802)".

> **Response:** Appendix III.E, Section 3.1.5 has been updated as requested. The revision date on the Integrated Contingency Plan Summary title page has been updated to January 2025. The revisions replace pages 362 and 367 of the original application pdf.

TCEQ Comment #T6:

Appendix III.E, Table III.E.1:

a. *Channel Industries Mutual Aid is listed twice in the table. Revise accordingly.*

b. *Clarify and revise Table III.E.1. to list local Fire Dept or Local Emergency Planning Committee as listed in Integrated Contingency Plan.*

c. *Include an Evacuation Map providing evacuation routes and Rally points.*

Response: Channel Industries Mutual Aid (CIMA) is a local non-profit mutual aid organization comprised of chemical plants, refineries, local municipalities, and governmental organizations including the cities of Pasadena, Deer Park, La Porte, and Houston, and the United States Coast Guard. The CIMA agreement provides access to fire and emergency equipment. As such, CIMA effectively serves the purpose of the local fire department for emergency response and therefore is listed as the local authority in charge of fire response. The local fire department and emergency planning committee are not first-line responders for emergencies at the refinery. To address comments T6(a) and (b), CIMA has been deleted from the "other" section of Table III.E.1 and remains listed in the "fire" section. These revisions replace page 372 of the original application.

Evacuation maps showing evacuation routes and rally points are provided with this submittal and will be added to Appendix III.E in the final revised application beginning on page 371 of the pdf.

TCEQ Comment #T7:

Appendix VII.B, Table VII.B: Revise Subtotal Cost and Total Closure Cost to correct number.

Response: Table VII.B has been revised with the correct costs as indicated. The revisions replace page 995 of the original application pdf. This edit also affects Table VII.E.1, which has been revised accordingly. The clean copy of Table VII.E.1 replaces page 1,014 of the original pdf.

TCEQ Comment #T8:

Appendix VI: The original geology report included as part of the renewal application must be signed and sealed by a Professional Geologist. Revise accordingly.

Response: The original geology report was included in the permit renewal application consistent with previous applications; however, the requirement for a complete geology report only applies to owners or operators of new hazardous waste management facilities; areal and/or capacity expansions of existing hazardous waste management facilities; and existing industrial solid waste facilities that store, process or dispose of hazardous waste in surface impoundments, landfills, land treatment units, waste piles (except those waste piles that meet the requirements of Section V.E.10.b. of the Part B application), and tanks or drip pads which require a contingent post-closure plan. None of these conditions apply to the PRSI refinery. Therefore, PRSI respectfully submits that the geology report is provided as a courtesy copy and a Professional Geologist signature and seal are not required.

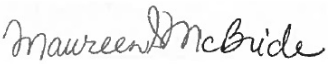
Because this renewal is a modification/amendment to an existing Compliance Plan, updated site geologic information derived from on-going investigations

since submittal of the last permit modification/amendment application is required. This information is included in Appendix VI and each original sheet of plans, drawings, maps, cross-sections, and other graphics, such as limits of contamination maps, etc. has been signed and sealed by a Professional Geologist.

Thank you for your time and attention. If you have any regarding this submittal, please contact me at 302-781-6060.

Sincerely,

AECOM



Maureen McBride
SME – Green and Sustainable Remediation
Environmental Compliance
US West Environment, Newark, DE
T: 302-781-6060
E: [redacted]

Enclosures/Attachments

cc: Rachel Vander Nat, TCEQ
Srinath Venkat, TCEQ
Mohammad Khan, TCEQ
Joseph Ebert, PRSI
Steph Seewald, PRSI
Alice Armstrong, PRSI
Peter Cagnetta, PRSI

Revised Pages in Response to Texas Commission on Environmental Quality Technical NOD 1

Application for Permit Renewal
Pasadena Refinery System, Inc.
Pasadena, Harris County, Texas

EPA ID # 008091290
Solid Waste Registration No. 30311
Hazardous Waste Permit and Compliance Plan No. 50112
Tracking No. 30191241

Prepared for:
Chevron

Prepared by:
AECOM
248 Chapman Road
Suite 101
Newark, DE 19702

Project No.: 60726317
Date: January 2025

Comment T1
Section II.F.1

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

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

Table II.E is included in Appendix II.

F. Flooding

1. Identify whether the facility is located within a 100-year flood plain [40 CFR 270.14(b)(11)(iii)]. This identification must indicate the source of data for such determination and include a copy of relevant documentation (e.g., flood maps, if used and/or calculations). The boundaries of the hazardous waste management facility must be shown on the flood plain map. If the facility is not subject to inundation as a result of a 100-year flood event, indicate that the facility is not within the 100-year flood plain, and do not complete the remainder of the Flooding section in Table II. An applicant for a proposed hazardous waste landfill, areal expansion of a hazardous waste landfill, or a commercial hazardous waste land disposal unit may not rely solely on flood plain maps prepared by the Federal Emergency Management Agency (FEMA) or a successor agency for this determination.

   Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map - Map Number 48201C0905N (with a map revision date of May 2, 2019) indicates that while parts of the facility are within the 100-year floodplain, the permitted units are outside of the Special Flood Hazard Areas, including the 100-year floodplain. The FEMA map is included in the Site Selection Report in Appendix II.

2. If the facility is located within the 100-year flood plain the applicant must provide information detailing the specific flooding levels and other events (e.g., Design Hurricane projected by Corps of Engineers) which impact the flood protection of the facility. Information shall also be provided identifying the 100-year flood level and any other special flooding factors (e.g., wave action) which must be considered in designing, construction, operating, or maintaining the facility to withstand washout from a 100-year flood. **Not Applicable**

3. State whether any flood protection devices exist at the facility (e.g., flood walls, dikes, etc.), designed to prevent washout from the 100-year flood.

   Not Applicable

   a. 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)]

   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)]

   Not Applicable

   b. 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

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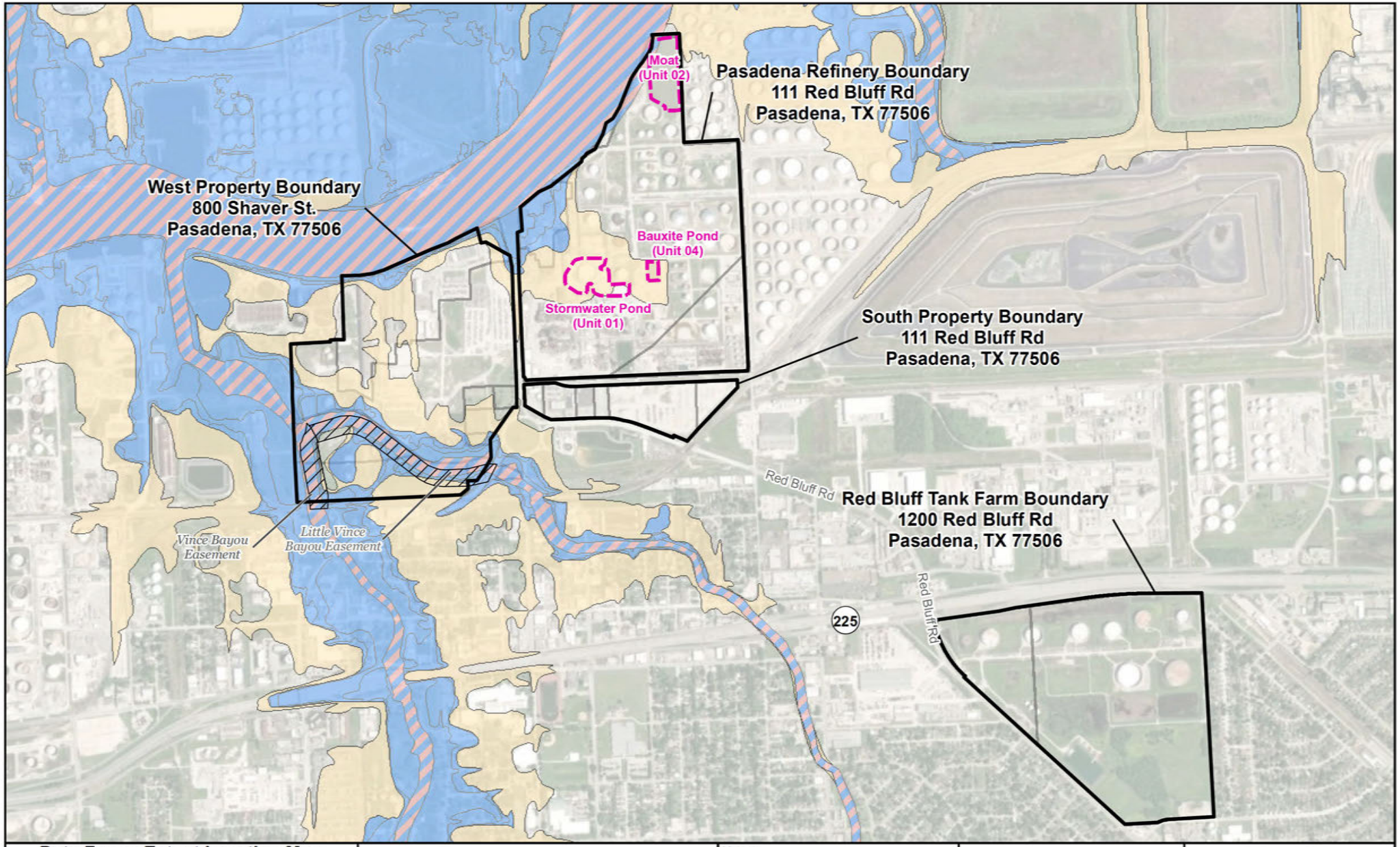
Not Applicable

b. 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

Comment T2
Appendix II – FEMA Flood Map



Data Frame Extent Location Map

Legend

- Regulatory Floodway
- Special Flood Hazard Area
- 100-Year Floodplain
- 0.2% Annual Chance Flood Hazard
- Site Boundary Line
- County Tax Parcel
- Tracts included in facility boundary for Corrective Action purposes only

Notes:
2022 Vivid Advanced Imagery Source: Maxar
USDA, USGS The National Map: Orthoimagery
Data refreshed June 2024. Powered by ESRI.

0 750 1,500
Feet
1 inch = 1,500 feet

MAP FORMATTED FOR "A" (8.5" X 11") SIZE SHEET.
TEXT SCALE NOT VALID FOR DIFFERENT PAGE SIZE.

AECOM
248 Chapman Road
Suite 101
Newark, DE 19702

PRSI RCRA Permit
Modification – South Property
Pasadena, Texas

Figure II.1
Facility Site Map

TASK NUMBER:	PROJECT NUMBER:
1.2	60704290
DESIGNED BY:	DATE:
M. MCBRIDE	1/14/2025
DRAWN BY:	FIGURE NUMBER:
C. DUFFY	II.1
DATA QUALITY CHECK BY:	
M. MCBRIDE	

Comment T3 Security Plan

AECOM

Security Plan

Pasadena Refining System, Inc.
Pasadena, Texas

EPA ID # 008091290
Solid Waste Registration No. 30311
Hazardous Waste Permit and Compliance Plan No. 50112

Prepared for:
Pasadena Refining System, Inc.
111 Red Bluff Road
Pasadena, TX 77506-1530

Prepared by:
AECOM
248 Chapman Road
Suite 101
Newark, DE 19702

Project No.: 60704290
Date: June 2023
Revised: January 2025

1.0 Introduction

Pasadena Refining System, Inc. (PRSI) operates a refinery and tank farm in the Pasadena-Houston, Texas area. The refinery is located north of State Highway 225 on both sides of the Washburn Tunnel and is comprised of three areas, the main refinery, west property, and south property. The refinery is bordered by the Houston Ship channel to the north and Richey Street and Red Bluff Road to the south.

The tank farm is located south of State Highway 225 and is bordered by the highway access road, Red Bluff Road, and a residential area.

The refinery area encompasses 331 acres and the tank farm approximately 131 acres for a total of 462 acres.

In accordance with 40 CFR Part 264.14, the following Security Plan describes the measures to control and prevent the entry of unauthorized persons or livestock into the active portion of the facility. This Security Plan is intended only as a summary of PRSI's existing Security Plan to provide easy assimilation by the Permit Writer.

1.1 Hazardous Waste Management Facilities

The previous facility owner operated the following hazardous waste management facilities (HWMFs):

- Stormwater Pond for the storage of stormwater. This area is active in delay of closure.
- Moat as a surface impoundment. This area is in post-closure status.
- Bauxite Pond as a surface impoundment. This area is in post-closure status.

1.2 Access Controls

The HWMFs use the overall refinery security methods for control of unauthorized persons entering these facilities. The Security Department's Operations Manual explains these methods in greater detail. A summary is provided below.

1.2.1 Fencing

The refinery and tank farm are completely enclosed by a hurricane fence except for the northern exposure of the refinery, which is bounded-by the Houston Ship Channel.

1.2.2 Gates

Gates located around the main refinery perimeter, west property perimeter, and the tank farm are either locked or manned 24 hours a day. The south property gates opening to Red Bluff Road are kept locked except for one gate allowing access to the main administration building. South property gates on Crown Street (which runs between the main refinery and south property) are generally open to allow for parking and access to administrative buildings. No hazardous wastes are stored on the south property, and no solid waste management units or areas of concern have been identified.

Security Plan

Pasadena Refining System, Inc.
Pasadena, Texas

EPA ID # 008091290
Solid Waste Registration No. 30311
Hazardous Waste Permit and Compliance Plan No. 50112

Prepared for:
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111 Red Bluff Road
Pasadena, TX 77506-1530

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Comment T4 Section III.E

264.1053(e), 264.1057, 264.1058, 264.1063, 264.1084, 264.1085, 264.1086, 264.1088, 264.1101(c)(4) and 270.14(b)(5). The inspection schedule should reflect the requirements described below. The schedule should encompass each type of hazardous waste management (HWM) unit (i.e., facility component) and its inspection requirements. For incorporation into a permit, complete Table III.D. - Inspection Schedule for all units to be permitted.

The owner or operator must inspect the facility for malfunctions and deterioration, operator errors, and discharges which may be causing or may lead to the release of hazardous waste constituents to the environment or which may pose a threat to human health. The owner or operator must conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.

The owner or operator must develop and follow a written schedule for inspecting other basic elements such as monitoring equipment, safety and emergency equipment, security devices, the presence of liquids in leak detection systems, where installed, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards.

If the owner or operator of a facility which contains a waste pile wishes to pursue an exemption from the groundwater monitoring requirements for that waste management unit, the inspection schedule must include examination of the base for cracking, deterioration, or other conditions that may result in leaks. The frequency of inspection must be based on the potential for the liner (base) to crack or otherwise deteriorate under the conditions of operation (e.g., waste type, rainfall, loading rates, and subsurface stability).

Inspection schedules for the Moat, Stormwater Pond, and Bauxite Pond are provided in Table III.D and checklists are provided in Appendix III.D. PRSI will remedy any deterioration or malfunction of equipment or structures revealed during inspections on a schedule that prevents the problem from leading to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action will be taken immediately. The date and a description of remedial action taken in response to facility inspections will be included in the inspection records. Inspection records will be kept for at least three years from the date of inspection.

E. Contingency Plan (Not Applicable to Permits for Post-Closure Care Only)

If the owner or operator has already prepared a Spill Prevention, Control, and Countermeasures (SPCC) Plan or some other emergency or contingency plan, he need only amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this section. Provide a Contingency Plan which includes all the information required by 40 CFR Part 264 Subparts C and D, except for 40 CFR 264.56(d)(1) and 30 TAC 335.153(2). This plan must also include a drawing of the facility which shows the location of all emergency equipment. In addition, complete the following tables to summarize information expressed in more detail in the plan.

The most recent update to the Integrated Contingency Plan (ICP), which includes the Emergency Response Action Plan, the Spill Prevention, Control, and Countermeasures (SPCC) Plan, and Contingency Plan, was in May 2024. The full text of the ICP was included with the Class 2 Permit Modification submitted on May 30, 2024. As requested by TCEQ following submittal of the modification, this permit renewal application includes only the required tables listed below, excerpts from the ICP providing the information required by 40 CFR Part 264 Subparts C and D, except for 40 CFR 264.56(d)(1) and 30 TAC 335.153(2), and drawings of the facility showing the location of all emergency equipment. These items are included in Appendix III.E. A copy of the integrated contingency plan is maintained in the operating record and is made available to local authorities. A copy will be provided to TCEQ upon request.

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Comment T5 Appendix III.E, Section 3.1.5

AECOM

Integrated Contingency Plan Summary

Pasadena Refining System, Inc.
Pasadena, Texas

EPA ID # 008091290
Solid Waste Registration No. 30311
Hazardous Waste Permit and Compliance Plan No. 50112

Prepared for:
Pasadena Refining System, Inc.
111 Red Bluff Road
Pasadena, TX 77506-1530

Prepared by:
AECOM
248 Chapman Road
Suite 101
Newark, DE 19702

Project No.: 60726317
Date: October 2024
Revised January 2025

3.1.4 Emergency Coordinator

A Refinery Shift Lead [the Qualified Individual (QI)] is available on site to coordinate all emergency response measures 24 hours per day. Refinery Shift Leads/QIs rotate on a shift schedule. The QI is thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, the QI has the authority to commit the resources needed to carry out the contingency plan. All QIs are Hazmat, Fire, Emergency Response Team, and Oil Spill Response Certified.

3.1.5 Emergency Procedures

The ICP sets out specific procedures for each type of emergency (i.e. fire, release). Whenever there is an imminent or actual emergency, the emergency coordinator immediately activates internal facility alarms or communication systems to notify all facility personnel and notifies the appropriate State or local agencies with emergency response roles if their help is needed.

Whenever there is a release, fire, or explosion (an event), the emergency coordinator immediately identifies the character, exact source, amount, and areal extent of any released materials. This is achieved by observation, review of facility records or manifests, and, if necessary, by chemical analysis. Concurrently, the emergency coordinator assesses possible hazards to human health or the environment that may result from the event, including both direct and indirect effects.

If the QI determines that the facility has had an event which could threaten human health or the environment outside the facility, they must report their findings as follows:

- If their assessment indicates that evacuation of local areas may be advisable, they will immediately notify appropriate local authorities. The QI is available to help appropriate officials decide whether local areas should be evacuated.
- They will immediately notify TCEQ or the National Response Center (using their 24-hour toll free number 800/424-8802) according to procedures set out in the State of Texas oil and hazardous substances spill contingency plan. The report will include:
    - Name and telephone number of reporter
    - Name and address of facility
    - Time and type of incident
    - Name and quantity of material(s) involved, to the extent known
    - The extent of injuries, if any
    - The possible hazards to human health or the environment outside the facility

During an emergency, the QI will take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures include, where applicable, stopping processes and operations, collecting and containing release waste, and removing or isolating containers.

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Revised: January 2025

3.1.4 Emergency Coordinator

A Refinery Shift Lead [the Qualified Individual (QI)] is available on site to coordinate all emergency response measures 24 hours per day. Refinery Shift Leads/QIs rotate on a shift schedule. The QI is thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, the QI has the authority to commit the resources needed to carry out the contingency plan. All QIs are Hazmat, Fire, Emergency Response Team, and Oil Spill Response Certified.

3.1.5 Emergency Procedures

The ICP sets out specific procedures for each type of emergency (i.e. fire, release). Whenever there is an imminent or actual emergency, the emergency coordinator immediately activates internal facility alarms or communication systems to notify all facility personnel and notifies the appropriate State or local agencies with emergency response roles if their help is needed.

Whenever there is a release, fire, or explosion (an event), the emergency coordinator immediately identifies the character, exact source, amount, and areal extent of any released materials. This is achieved by observation, review of facility records or manifests, and, if necessary, by chemical analysis. Concurrently, the emergency coordinator assesses possible hazards to human health or the environment that may result from the event, including both direct and indirect effects.

If the QI determines that the facility has had an event which could threaten human health or the environment outside the facility, they must report their findings as follows:

- If their assessment indicates that evacuation of local areas may be advisable, they will immediately notify appropriate local authorities. The QI is available to help appropriate officials decide whether local areas should be evacuated.
- They will immediately notify TCEQ or the National Response Center (using their 24-hour toll free number 800/424-8802) according to procedures set out in the State of Texas oil and hazardous substances spill contingency plan. The report will include:
    - Name and telephone number of reporter
    - Name and address of facility
    - Time and type of incident
    - Name and quantity of material(s) involved, to the extent known
    - The extent of injuries, if any
    - The possible hazards to human health or the environment outside the facility

During an emergency, the QI will take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures include, where applicable, stopping processes and operations, collecting and containing release waste, and removing or isolating containers.

Comment T6 Appendix III.E Table III.E.1 and Evacuation Maps

Table III.E.1- Arrangements with Local Authorities

Police

Address	Pasadena City Hall, 1149 Ellsworth Drive, Pasadena, TX 77506
Person Contacted	Jerry Wright
Phone Number	(713) 477-1511
Agreed Arrangements	The Pasadena Police Department will provide normal public safety activities, assist traffic and scene control.

Fire

Address	Channel Industries Mutual Aid 1450 East Blvd, Deer Park, TX 77536
Person Contacted	Susan Barnes
Phone Number	(281) 476-5040
Agreed Arrangements	Requests can be made through CIMA for fire and emergency equipment.

Hospital

Address	Memorial Herman Employer Services – located on-site 111 Red Bluff Road, Pasadena, TX 77506
Person Contacted	Deborah C. Gordon
Phone Number	(713) 222-2273
Agreed Arrangements	Will provide medical treatment to potentially injured employees and if needed, coordinate transportation to a Memorial Herman Medical Services facility.

Other

Organization Name	
Address	
Person Contacted	
Phone Number	
Agreed Arrangements	

Table III.E.1- Arrangements with Local Authorities

Police

Address	Pasadena City Hall, 1149 Ellsworth Drive, Pasadena, TX 77506
Person Contacted	Jerry Wright
Phone Number	(713) 477-1511
Agreed Arrangements	The Pasadena Police Department will provide normal public safety activities, assist traffic and scene control.

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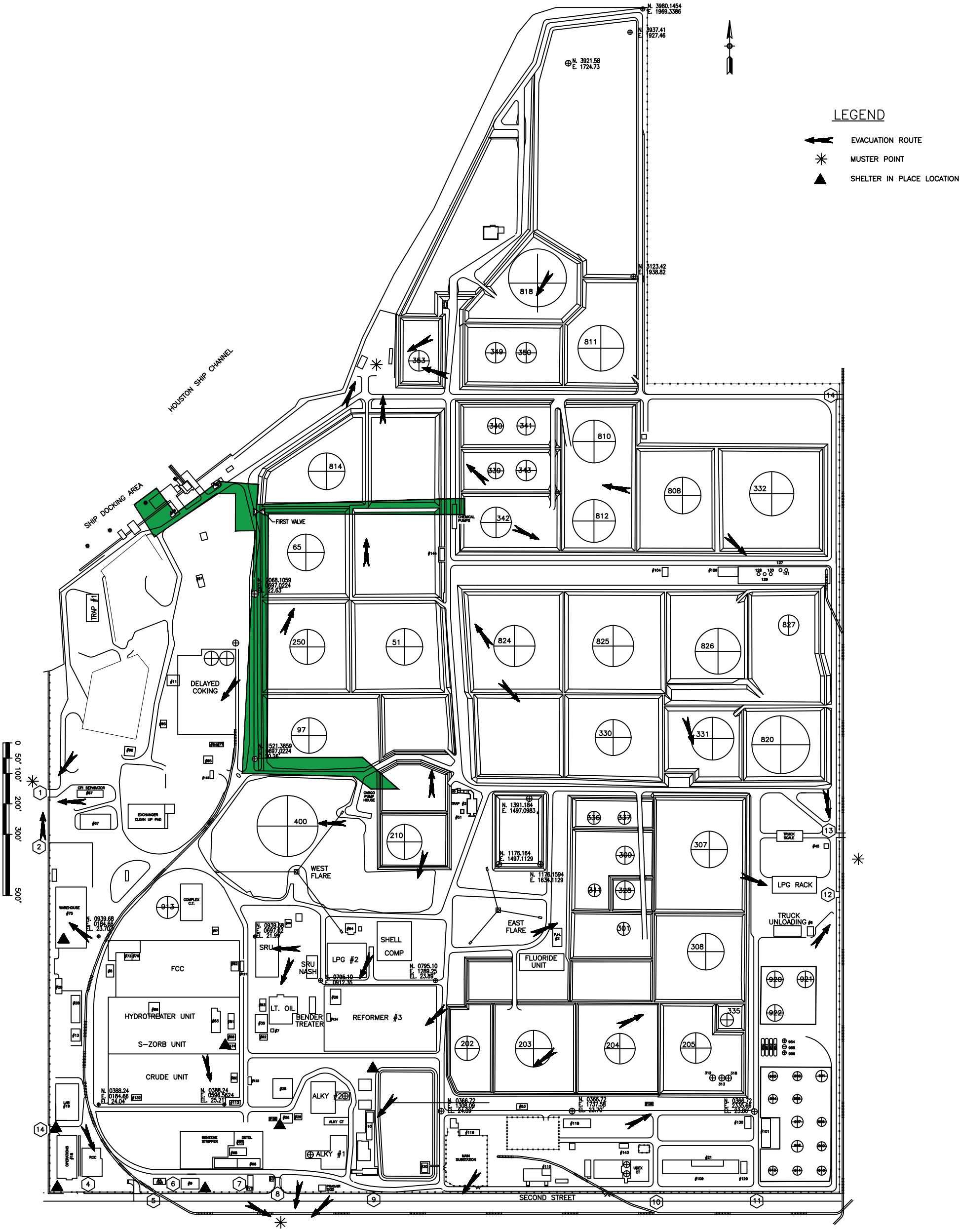
Person Contacted	Deborah C. Gordon
Phone Number	(713) 222-2273
Agreed Arrangements	Will provide medical treatment to potentially injured employees and if needed, coordinate transportation to a Memorial Herman Medical Services facility.

Other

Organization Name	~~Channel Industries Mutual Aid~~
Address	~~1450 East Blvd, Deer Park, TX 77536~~
Person Contacted	~~Susan Barnes~~
Phone Number	~~(281) 476-5040~~
Agreed Arrangements	~~Requests can be made through CIMA for fire and emergency equipment and/or Command Vans and CIMA specialists.~~

EVACUATION DIAGRAM
REFINERY



NOTES:

REFERENCE DRAWINGS	
NO.	TITLE

REVISIONS						
NO.	FIRM	DATE	DESCRIPTION	BY	CHK.	APP.
0	ERM	11/10/21	REVISION	RDD		

ENGINEERING RECORD			
PROJ. MANAGER:	RG	ERM JOB NUMBER	0608056
PROJ. ENGR:	JS		
PROJ. DESIGN:	RD		

ERM The business of sustainability

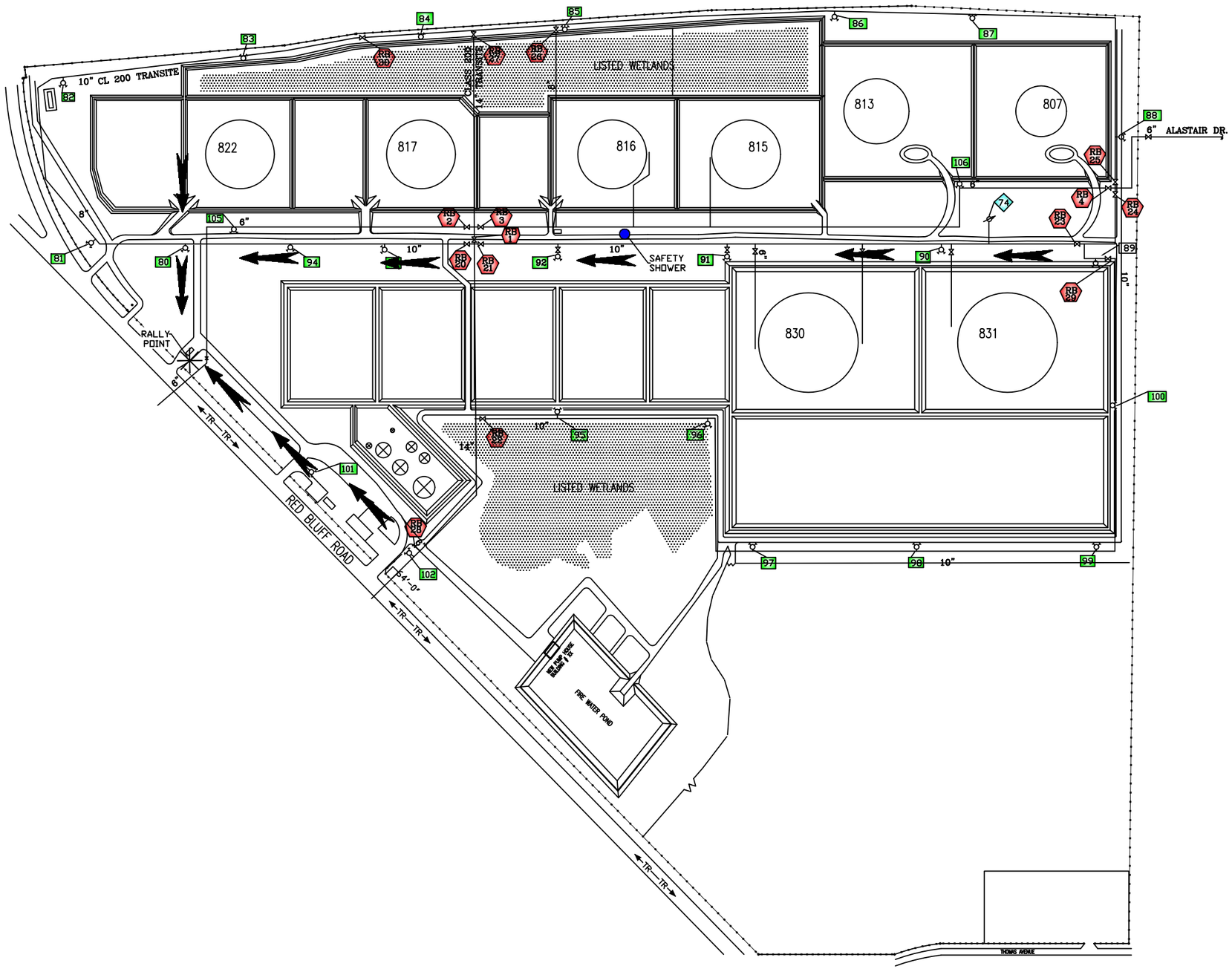
Pasadena Refining PRSI **PASADENA REFINING SYSTEM, Inc.**

PASADENA, TEXAS

REFINERY GENERAL
EVACUATION DIAGRAM
PLOT PLAN

PLOT SCALE: 1" = 100'	DWG. NO. P-9828	REV 0
FILE NAME:		

EVACUATION DIAGRAM
RED BLUFF TANK FARM



NOTES:

1. FACILITY PIPING DIAGRAMS ARE MAINTAINED IN THE REFINERY'S DRAWINGS DATA BASE AND IS ORGANIZED ACCORDING TO EACH UNIT. ACCESS TO EACH DIAGRAM IS AVAILABLE THROUGH THE DRAFTING DEPARTMENT FILE ROOM.

NOTES:

REFERENCE DRAWINGS	
NO.	TITLE

REVISIONS						
NO.	FIRM	DATE	DESCRIPTION	BY	CHK.	APP.
0	ERM	11/10/21	REVISION	RDD		

ENGINEERING RECORD			
PROJ. MANAGER:	RG	ERM JOB NUMBER	0608056
PROJ. ENGR:	JS		
PROJ. DESIGN:	RD		

ERM The business of sustainability

Pasadena Refining PRSI

PASADENA REFINING SYSTEM, Inc.

PASADENA, TEXAS

RED BLUFF TANK FARM
EVACUATION DIAGRAM
LOCATION DWG.

PLOT SCALE: 1" = 100'

FILE NAME:

DWG. NO. P9829

REV 0

EVACUATION DIAGRAM
WEST PROPERTIES

LEGEND

- Fence/Property Boundary
- Drainage Area Boundary
- Drainage Ditch with Flow Direction
- Sheet Flow Drainage
- <90 Day Hazardous Waste Storage Area
- Evacuation Route
- Evacuation Muster Point

0 400 800

SCALE FEET

REV.	DESCRIPTION	BY	DATE	APP.
2	2021 SPCC Update Revision	RLM	10/25	JS
1	FIELD MARK-UPS	RVH	6/14	AW

REVISIONS

PASADENA REFINING SYSTEM, Inc.
PASADENA, TEXAS

Pasadena Refining PRSI

PRSI West Properties Plot Plan

SCALE: AS NOTED			UNIT	DWG. NO.	REV.
DWN. BY RVH	DATE: 4/18		98	98-01-P9825	0
CH'D. BY AW	DATE: 4/18				
APP'D. BY	DATE:				

P:\Projects\0608056 Pasadena TX Refinery Chevron Pasadena Refinery - 2021RG\CAD\0608056-West Plant Drainage.dwg,

Comment T7 Appendix VII.B, Table VII.B and Appendix VII.E, Table VII.E.1

Table VII.B. - Unit Closure Cost Estimate

Task	Cost
Preparatory Activities	$6,540.00
Contractor Mobilization	$55,811.00
Closure Implementation	$2,385,176.00
Closure Certification Report	$45,510.00
Deed Recordation	$6,968.00
Other tasks (such as labor, lab analysis, transportation, certifications, etc.)	
Other tasks	
Subtotal	$2,500,005.00
Contingency (10% minimum)	$250,000.00
Total Closure Cost Year 2023	$2,750,005.00

Table VII.B. - Unit Closure Cost Estimate

Task	Cost
Preparatory Activities	$6,540.00
Contractor Mobilization	$55,811.00
Closure Implementation	$2,385,176.00
Closure Certification Report	$45,510.00
Deed Recordation	$6,968.00
Other tasks (such as labor, lab analysis, transportation, certifications, etc.)	
Other tasks	
Subtotal	$5,000,010.00 $2,500,005.00
Contingency (10% minimum)	$250,000.00
Total Closure Cost Year 2023	$5,250,010.00 $2,750,005.00

Table VII.E.1. - Permitted Unit Closure Cost Summary

Existing Unit Closure Cost Estimate		
Unit		Cost
Stormwater Pond (NOR 002)		$2,750,005.00
Total Existing Unit Closure Cost Estimate[1]	Year 2024	$2,750,005.00

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.

Table VII.E.1. - Permitted Unit Closure Cost Summary

Existing Unit Closure Cost Estimate		
Unit		Cost
Stormwater Pond (NOR 002)		$5,250,010.00 $2,750,005.00
Total Existing Unit Closure Cost Estimate[1]	Year 2024	$5,250,010.00 $2,750,005.00

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.

Texas Commission on Environmental Quality

Waste Permits Division Correspondence Cover Sheet

Date: May 15, 2025
Facility Name: Pasadena Refining System, Inc.
Permit or Registration No.: HW 50112

Nature of Correspondence:
☐ Initial/New
☒ Response/Revision to TCEQ Tracking No.: None (from subject line of TCEQ letter regarding initial submission)

Affix this cover sheet to the front of your submission to the Waste Permits Division. Check appropriate box for type of correspondence. Contact WPD at (512) 239-2335 if you have questions regarding this form.

Table 1 - Municipal Solid Waste Correspondence

Applications	Reports and Notifications
☐ New Notice of Intent	☐ Alternative Daily Cover Report
☐ Notice of Intent Revision	☐ Closure Report
☐ New Permit (including Subchapter T)	☐ Compost Report
☐ New Registration (including Subchapter T)	☐ Groundwater Alternate Source Demonstration
☐ Major Amendment	☐ Groundwater Corrective Action
☐ Minor Amendment	☐ Groundwater Monitoring Report
☐ Limited Scope Major Amendment	☐ Groundwater Background Evaluation
☐ Notice Modification	☐ Landfill Gas Corrective Action
☐ Non-Notice Modification	☐ Landfill Gas Monitoring
☐ Transfer/Name Change Modification	☐ Liner Evaluation Report
☐ Temporary Authorization	☐ Soil Boring Plan
☐ Voluntary Revocation	☐ Special Waste Request
☐ Subchapter T Disturbance Non-Enclosed Structure	☐ Other:
☐ Other:	

Table 2 - Industrial & Hazardous Waste Correspondence

Applications	Reports and Responses
☐ New	☐ Annual/Biennial Site Activity Report
☐ Renewal	☐ CPT Plan/Result
☐ Post-Closure Order	☐ Closure Certification/Report
☐ Major Amendment	☐ Construction Certification/Report
☐ Minor Amendment	☐ CPT Plan/Result
☐ CCR Registration	☐ Extension Request
☐ CCR Registration Major Amendment	☐ Groundwater Monitoring Report
☐ CCR Registration Minor Amendment	☐ Interim Status Change
☐ Class 3 Modification	☐ Interim Status Closure Plan
☐ Class 2 Modification	☐ Soil Core Monitoring Report
☐ Class 1 ED Modification	☐ Treatability Study
☐ Class 1 Modification	☐ Trial Burn Plan/Result
☐ Endorsement	☐ Unsaturated Zone Monitoring Report
☐ Temporary Authorization	☐ Waste Minimization Report
☐ Voluntary Revocation	☐ Other:
☐ 335.6 Notification	
☒ Other: Response to Comments	

PASADENA REFINING SYSTEM, INC.

111 Red Bluff Road
Pasadena, Texas 77506
Office: 713-472-2461

May 15, 2025

Ms. Kelly Keel
Executive Director
Texas Commission on Environmental Quality
Attention: Industrial and Hazardous Waste Permits Section, MC 130
Waste Permits Division
P.O. Box 13087
Austin, Texas 78711-3087

ELECTRONIC SUBMITTAL

RE: Technical NOD 1 - Compliance Plan
Application for Hazardous Waste Permit and Compliance Plan Renewal
Pasadena Refining System, Inc. (PRSI)
111 Red Bluff Road, Pasadena, Harris County
TCEQ Hazardous Waste Permit / Compliance Plan No. 50112
TCEQ SWR No. 30311; CN603137605; RN100716661; EPA ID No. TXD008091290

Dear Ms. Keel:

Please accept the attached Response to Comments prepared by AECOM on behalf of Pasadena Refining System, Inc. for comments received on March 13, 2025 for the Hazardous Waste Permit and Compliance Plan renewal.

If you have any questions regarding this application, you may contact me via email at jebert@chevron.com an[redacted] or 713-472-4051.

Sincerely,

Joseph Ebert
HSE Manager
Pasadena Refinery

cc: File

AECOM
248 Chapman Road
Suite 101
Newark, DE 19702
USA
aecom.com

May 15, 2025

Ms. Kelly Keel
Interim Executive Director
Texas Commission on Environmental Quality
Attention: Industrial and Hazardous Waste Permits Section, MC 130
Waste Permits Division
P.O. Box 13087
Austin, Texas 78711-3087

RE: Response to Comments – Compliance Plan Technical NOD 1
Pasadena Refining System, Inc. – Pasadena, Harris County
Hazardous Waste Permit No. 50112
Industrial Solid Waste Registration No. 30311
EPA Identification No. TXD008091290
RN100716661/ CN603137605

Dear Ms. Keel:

On March 13, 2025, Pasadena Refining System, Inc. (PRSI) received Agency's Compliance Plan Technical Notice of Deficiency (NOD) 1 comments for the Hazardous Waste Permit Number 50112 renewal application for the Pasadena Refinery, located in Pasadena, Texas. Below you will find the Agency comments followed by the PRSI responses.

Comment CP1*, CP Attachment A, Sheets 1 – 10: Please reorder and renumber the CP Attachment A Sheets so that they are presented in the following order:*

a) *Overall Facility Site Map;*
b) *The maps that depict the RCRA-regulated units, solid waste management units (SWMUs), and Areas of Concern (AOCs) for Main Refinery, Red Bluff Tank Farm, and the West Property; and*
c) *Monitoring well maps for the Main Refinery, Red Bluff Tank Farm, and the West Property.*

Response: The figures have been updated as requested. The revised figures are provided in Attachment A. In addition, Sheet 3 has been updated to reflect the intended boundaries of AOCs 10 and 11 (the Plume Management Zones on the Main Refinery rather than the individual groundwater regions) consistent with the CP Tables.

Comment CP2*, CP Attachment A, Sheets 2, 4, and 10 of 10: Please clarify the correct Permit Unit No. for the Bauxite Pond (NOR WMU 007). Sheets 2 and 10 identify the Bauxite Pond as Permit Unit No. 4, whereas Sheet 4 and Attachment D of PRSI's permit dated April 1, 2015 identify it as Permit Unit No. 3. Please revise the Sheets where necessary.*

Response: The figures have been updated as requested. The Bauxite Pond has consistently been listed as Permit Unit Number 3 on facility Notices of Registration and other documents; therefore, the references to the Bauxite Pond show it as Unit Number 3. The revised figures are provided in Attachment A.

Comment CP3*, CP Attachment A, Sheets 2, 3, 5, 7, and 8 of 10: The CP Attachment A Maps must be legible in black and white since the final permit will be issued in black and*

white. Therefore, please revise the following CP Attachment A Sheets so that the elements listed below are legible and discernible in black and white:

a) *Sheets 2 and 3: Use a different map symbol to differentiate the "point of compliance" boundary outline from the "hazardous waste management unit" boundary outline;*
b) *Sheet 5: Revise the symbols used for the outlines of the Storm Water Ditch, AOCs, and SWMUs. PRSI may also want to consider adjusting the opacity of the background image to improve the legibility of the map;*
c) *Sheets 7 and 8:*
    i. *Revise the symbol used for the "Extent of LNAPL" because it is not legible from the maps' background images; and*
    ii. *Revise one of the symbols used for the "PMZ Observation Well" and "Observation Well" because these symbols look the same when reproduced in black and white.*

Response: The figures have been updated as requested. The revised figures are provided in Attachment A.

***Comment CP4**, CP Attachment A, Sheets 4, 6, and 9: Please revise the CP Attachment A Sheets per the following:*

a) *Sheet 4:*
    i. *Remove the monitoring wells on the map so that the location of the hazardous waste management units, SWMUs, and AOCs are more clearly depicted. Also, please revise the name of the Sheet;*
    ii. *Increase the size of the AOC numbers on the South Property so that they are legible;*
b) *Sheets 6 and 9: Revise the outline symbol used for either the Groundwater AOC (AOC 21) or the PRSI West Property AOCs (AOCs 28 and 29) because these outlines look the same on the map when reproduced in black and white. Also update the map's legend;*
c) *Sheet 9:*
    i. *Increase the size of the legend since it is not legible at full document size (i.e., 100% PDF zoom); and*
    ii. *Use different symbols to depict the different types of monitoring wells used for the PRSI West plume management zones (PMZs). Add these symbols to the map's legend.*

Response: The figures have been updated as requested. The revised figures are provided in Attachment A.

***Comment CP5**, Table XI.A.1 (and Table V.D.1):*

a) *Per Section 2.2 of the "Compliance Monitoring Program and Monitoring System Plan" included in Appendix XI.C.1.a., add the K049 hazardous waste code to the Moat RCRA regulated unit. Please also add this waste stream to Table V.D.1;*
b) *Per the information listed on Tables IV.B. and V.D.1., add the missing EPA hazardous waste codes for the Moat (i.e., D002, D003, and D028) and the Stormwater Pond (i.e., D003, D008, D026, and K052);*
c) *Per the May 24, 2022 RCRA Facility Assessment (RFA) Report for Tank 97, please add F037 as a hazardous waste stream previously managed in the tank;*
d) *Please add the amount of waste closed in-place for the Stormwater Pond and Bauxite Pond;*
e) *Please clarify the information for the Tank Fire Walls (SWMU 1). Table XI.A.1. shows that the SWMU was closed in 2012 and did not have evidence of a release of hazardous constituents to groundwater, but CP Table II shows that the SWMU is currently subject to RCRA Corrective Action for soil and groundwater contamination;*
f) *Please clarify the information for the Refinery Maintenance Area Ditch (SWMU 7) and the Detol Pad (SWMU 8). Table XI.A.1. shows that the SWMUs were closed in 2012,*

but CP Table II shows that the SWMUs are currently subject to RCRA Corrective Action for soil contamination; and

g) *Revise the AOC numbers listed for the South Property AOCs to match the numbers listed in the October 2024 RFA Report. Also, assign a new AOC number for the West Property Former Roll-ff Bin Storage AOC. Alternatively, the it can be removed from Table XI.A.1 because it is still unclear if this AOC is subject to RCRA Corrective Action (per the October 2024 RFA Report).*

Response:

a. To reconcile the waste codes, PRSI reviewed the 1991 Deed Restriction for the Main Refinery and the preliminary review unit checklists provided in the 2015 RCRA permit renewal application. Waste codes D002, D003, D028, K049, and K050 were added for the Moat. PRSI also found that the 1991 Deed Restriction and the Preliminary Review Checklists included in the 2015 permit renewal application included waste code K051 associated with the Moat; however, as this waste code applies only to API Separator Sludge (40 Code of Federal Regulations Part 261, Appendix VII) and there has never been an API Separator at this facility, waste code K051 was not added to Table XI.A.1.

b. To reconcile the waste codes, PRSI reviewed the 1991 Deed Restriction for the Main Refinery, the Stormwater Pond Closure Report (1992), and the preliminary review unit checklists provided in the 2015 RCRA permit renewal application. Waste codes D003, D008, D026, D028, and K052 were added for the Stormwater Pond. In addition, the date of last waste placement and date of unit closure were updated with information from the Stormwater Pond Closure Report.

c. The F037 waste code has been added to Table XI.A.1 for Tank 97. In addition, the 2024 Tank 97 Affected Area Assessment Report (APAR) indicates evidence of a release. Table XI.A.1 has been updated accordingly. Table XI.A.1 has also been updated to reflect evidence of a release at Tanks 203 and 204 (SWMU 12) consistent with CP Table II and Tank 307 (SWMU 15) consistent with the March 16, 2023 letter from PRSI to TCEQ (15-Day Notification of Potential Release/Area of Concern).

d. During the records search conducted in response to this comment, PRSI did not find documentation for the amount of waste closed in place for the Stormwater Pond. The 1992 Stormwater Pond closure report indicates that some excessively soft and wet materials were excavated and disposed of in the Moat.

   A Notice of Closed Waste Management Units filed with the deed to the refinery property on April 8, 1991 indicates that no waste was left in place upon closure of the Bauxite Pond, although an unknown amount of liner and potentially contaminated soil were left in place. A copy of the notice text is provided in Attachment B. Table XI.A.1 has been updated to reflect an unknown amount of hazardous waste left in place upon closure of the Bauxite Pond.

e. SWMU 1 has been investigated and remedial activities have been completed. The SWMU is currently being monitored according to the Compliance Plan. Table XI.A.1 has been updated to reflect the correct information as shown in CP Table II.

f. SWMUs 7 and 8 have been investigated and remedial activities have been completed. The SWMUs are currently being monitored according to the Compliance Plan. Table XI.A.1 has been updated to reflect the correct information as shown in CP Table II.

g. The South Property AOC numbers in Table XI.A.1 have been revised and the West Property Former Roll-Off Bin Storage AOC has been removed from Table XI.A.1.

The following additional corrections were made: omissions were found and corrected in Table V.D.1, and a typographical error in Table IV.B was corrected. Redline and clean copies of the updated tables are included in Attachment C.

***Comment CP6**, CP Tables, Table XI.A.1, and CP Attachment A Sheets: Ensure that the same name is used for the RCRA regulated units, SWMUs, and AOCs on all CP Tables, Table XI.A.1., and the CP Attachment A Sheets.*

Response: Names of RCRA regulated units, SWMUs, and AOCs have been updated for consistency. Revised figures are in Attachment A. Revised tables are included in Attachment C.

***Comment CP7**, CP Table II and Table XI.A.1: Revise the tables so that the names for the West Property SWMUs and AOCs are the same on both tables. The TCEQ recommends using SWMU/AOC names that are descriptive and match (or closely match) the names listed in October 2024 RFA Report so that the site's Administrative Record is clear going forward.*

Response: CP Table II and Table XI.A.1 have been revised so that the names of the West Property, South Property, and Refinery SWMUs and AOCs are the same on both tables. All SWMU and AOC names are now descriptive and for the West Property and South Property, closely match the names listed in the October 2024 RFA Report. Revisions are included in Attachment C.

***Comment CP8**, CP Table I: Please remove the Ponds Waste Management Area (WMA) from CP Table I.A. and add it to CP Table I.D. The Ponds WMA is comprised of two RCRA-regulated units, and the releases from the Ponds WMA are commingled with one or more SWMUs/AOCs (i.e., AOC 11, the Site-Wide PMZ.) Therefore, the Ponds WMA is subject to Alternative Corrective Action, per 30 TAC §335.151 and Footnote 3 on CP Table I.*

Response: PRSI has updated CP Table I in accordance with this comment. The revised table is included in Attachment C.

***Comment CP9**, CP Table I and CP Table II: As stated in the October 2024 RFA Report, add the Notice of Registration numbers for the waste management units included in AOC 21, the West Property Groundwater PMZ (i.e., PP014, PP017, and PP026 for the pulp mill under SWR No. 30582, and PM020 for the paper mill under SWR No. 86155).*

Response: PRSI has updated CP Table I and CP Table II in accordance with this comment. The revised tables are included in Attachment C.

***Comment CP10**, CP Table II: Per Footnote 2, please add the Remedy Standard (or Risk Reduction Standard) completed for SWMUs 2, 3, 4, 5, and 9, unless if these SWMUs received "no further action" (NFA) without being subject to either regulatory program. Also, provide a copy of the September 7, 2006 NFA letter for the SWMUs.*

Response: Property deed notices (See Attachment B) indicate that these units were closed under Risk Reduction Rule Standard 3. TCEQ provided a copy of the September 7, 2006 NFA letter for the Trap no. 2 Sump (SWMU 3) and the letter is included in Attachment B. PRSI was not able to locate the September 7, 2006 No Further Action (NFA) letter for the other SWMUs; therefore, the deed notices and proof of filing in Harris County are provided in Attachment B to support the previous receipt of NFA.

***Comment CP11**, CP Table III, CP Table IIIA, CP Table IV, and CP Table IVA: The releases from the SWMUs and AOCs listed on CP Tables III, IIIA, IV, and IVA are subject to the Texas Risk Reduction Program (TRRP). Therefore, please revise the tables so that:*

a) The groundwater designation for each chemical of concern (COC) is based on a TRRP exposure pathway;
b) The groundwater protection standard (GWPS) for each COC is based on the TRRP protective concentration levels (PCLs); and
c) The "TRRP GWPS Designations and Definitions" are listed at the bottom of each table (rather than the "RRR GWPS Designations and Definitions.") Per 30 TAC §350.2(m), the Risk Reduction Rules and TRRP GWPS designations and definitions may not be combined and used for the same release area.

Response: PRSI has updated CP Table III, CP Table IIIA, CP Table IV, and CP Table IVA in accordance with this comment. Newly added COCs are assigned a conservative groundwater ingestion (GW_{ING}) PCL pending calculation of site-specific surface water-groundwater (^{SW}GW) PCLs, at which time PRSI plans to request a permit modification to revise the Compliance Plan. Redline and clean copies of the tables are provided in Attachment C.

***Comment CP12**, CP Table III:*

a) For the Ponds Waste Management Area (WMA), add the missing hazardous constituents that are the "basis for listing" for the EPA hazardous waste numbers listed in Table XI.A.1. and in CP5.b. above (i.e., add benzo(a)pyrene, chrysene, lead, and chromium). Add any other COCs as appropriate given the Pond WMA's waste management history;
b) Revise the GWPS for 1,2-dichloroethane, 2,4-dimethylphenol, and vanadium so that the GWPS is based on the current TRRP PCLs (last updated February 2025); and
c) Remove chlorine as a COC for the West Property Groundwater PMZ, per the TCEQ's November 4, 2021 "Approval with Comments" letter.

Response: PRSI has updated CP Table III in accordance with this comment. Redline and clean copies of the tables are provided in Attachment C.

***Comment CP13**, CP Table III and CP Table IIIA:*

a) For the Site-Wide PMZ and Groundwater Region 7 PMZ, add the TRRP designation and applicable PCL for benzo(a)anthracene;
b) For the Ponds WMA, add the GWPS and TRRP designations to Column C, which are the same TRRP designations and GWPS as Column B, per 30 TAC §335.151;
c) Add all omitted degradation products for tetrachloroethylene;
d) Add polychlorinated biphenyls (PCBs), dioxins/furans, and lead as COCs for the West Property Groundwater PMZ, per the TCEQ's April 11, 2014 "Approval with Comments" letter and the 2023 Response Action Effectiveness Report (RAER); and
e) Revise the GWPS for vanadium so that it is based on the current TRRP PCL (last updated February 2025).

Response: PRSI has updated CP Table III and CP Table IIIA in accordance with this comment. Redline and clean copies of the tables are provided in Attachment C.

***Comment CP14**, CP Table IV:*

a) For the Moat, add the missing hazardous constituents that are the "basis for listing" for the EPA hazardous waste numbers listed in Table XI.A.1., CP5.a., and CP5.b. above

(i.e., add benzo(a)pyrene, chrysene, 1,2-dichloroethane, lead, and chromium). Add any other COCs as appropriate given the Moat's waste management history;

b) *Add barium and toluene as COCs for the Moat's Compliance Monitoring Program. These COCs are included on CP Table IVA, but are omitted from CP Table IV;*
c) *Add all degradation products for 1,1,1-trichloroethane; and*
d) *Revise the concentration limit for each COC so that it is based on the Method Quantitation Limit for the COC.*

Response: PRSI has updated CP Table IV in accordance with this comment. Redline and clean copies of the tables are provided in Attachment C.

***Comment CP15**, CP Attachment A Sheets and CP Table V:*

a) *Please review the designated alternate point of exposure (APOE) wells for the PMZs established for the Site-Wide PMZ (AOC 11) and the Groundwater Region 7 PMZ (AOC 10);*
b) *Ensure these APOE wells are listed as APOE wells on CP Table V instead of point of exposure (POE) wells; and*
c) *Revise the applicable CP Attachment A Sheets where necessary.*

Response: The wells previously designated as point of exposure (POE) wells for the Site-Wide PMZ (AOC 11) and the Groundwater Region 7 PMZ (AOC 10) have been revised to alternate point of exposure (APOE) wells as requested. Revised figures are included in Attachment A. Revised tables are included in Attachment C. Revised text is included in Attachment E.

***Comment CP16**, Part A Table III-2, Part B Table XI.A.1., and CP Table VI:*

a) *The service start date, end date, and years of service listed on the three tables are not consistent for the Stormwater Pond and the Bauxite Pond. Please list these parameters for each unit, clarify the discrepancies, and revise the tables where necessary; and*
b) *For CP Table VI, please separately list the Stormwater Pond and the Bauxite Pond because the operational history for each unit has different start, end, and closure dates.*

Response:

a) Service start dates were confirmed through a facility records search and historical aerial photographs. Service end dates were confirmed using a deed notice (Stormwater Pond) and TCEQ's closure certification acceptance letter (Bauxite Pond). The results of the reconciliation are as follows:

   - Stormwater Pond service start date: 1973; service end date: 1992 (interim closure); years of service: 19.
   - Bauxite Pond service start date: 1947; service end date: 1992; years of service: 45.

   Copies of the deed notice and closure certification acceptance letter are provided in Attachment B. Revised tables are included in Attachment C. Historical aerial photographs are included in Attachment D.

b) The Stormwater Pond and Bauxite Pond are listed separately on CP Table VI as requested. A copy of the revised table is included in Attachment C.

***Comment CP17**, XI.D.3.a.(6) and CP Table VII: The response text for XI.D.3.a.(6) states that PRSI will submit semi- annual groundwater monitoring reports for the Ponds WMA, Site-Wide PMZ, and Groundwater Region 7 PMZ. However, CP Table VII states that PRSI will submit the groundwater report annually by January 21st (which corresponds with the*

existing reporting requirements for the Moat and the new reporting requirements for the West Property PMZ). The TCEQ is open to revising the reporting schedule for all release areas listed on CP Table I. However, please provide justification if PRSI is requesting annual reporting and revise the application's response text. Alternatively, revise CP Table VII to reflect the actual reporting schedules and frequency for the release areas listed on CP Table I.

Response: PRSI is requesting a change from semi-annual to annual reporting for the Site-Wide PMZ, including the Ponds WMA, and Groundwater Region 7 PMZ; however, we propose that monitoring frequency, wells monitored, groundwater recovery, and LNAPL removal for those units remain unchanged. As shown in the *Semi-Annual Corrective Action and Compliance Monitoring Report* for July 2024 to December 2024, site conditions remain generally stable. The groundwater recovery system maintains hydraulic control and a high percentage of wells within these areas (95% in the Ponds WMA and Site-Wide PMZ, 71% in Groundwater Region 7) show no LNAPL and no exceedances of groundwater protection standards. Therefore, PRSI is recommending a reduction in reporting frequency.

PRSI is also requesting a reduction in sampling frequency from semi-annual to annual for the Moat. Since 2015, analytical results for Table IV constituents have consistently been non-detect in all point-of-compliance (POC) wells for the Moat area except for toluene and barium. Toluene was detected in approximately 13% of field samples in POC wells at three to four orders of magnitude below the GWPS, compared with detections in 16% of background well samples at the same order of magnitude. Barium was consistently detected in POC wells at one order of magnitude below the GWPS, consistent with detections in the background well. Therefore, PRSI proposes to add toluene and barium to CP Table IV and sample annually for the constituents listed in CP Table IV. If a statistically significant increase in toluene or barium is observed during annual sampling, semi-annual CP Table IVA sampling could be resumed.

Attachment E contains the updated application text.

***Comment CP18**, XI.C.1.a.(1), XI.D.3.a.(1), and CP Table VIII: Please revise the application's response text and CP Table VIII, Items C through G, so that the groundwater sampling events occur within the first 30 days of the first and third quarters. PRSI may submit a request to the TCEQ on a case-by-case basis for an extension if severe inclement weather is expected that would prevent PRSI from completing the sampling event on time. Please note that this sampling schedule is standard for RCRA hazardous waste permitted sites in the State of Texas.*

Response: PRSI has updated the text and CP Table VIII as requested. Thank you for the clarification that exceptions for inclement weather may be accepted on a case-by-case basis. The revised text is provided in Attachment E. Revised CP Table VIII is provided in Attachment B.

***Comment CP19**, CP Attachment C [Appendix XI.C.1.b. and Appendix XI.D.3.]: Please submit the Sampling and Analysis Plans (SAPs) that are currently used by PRSI's current environmental consultant (AECOM) for the groundwater monitoring programs (e.g., The SAP in Appendix C was prepared by JD Consulting, L.P and was last revised in 2007. The SAP in Appendix D was prepared by RPS in July 2012, and it does not include the West*

Property PMZ's Corrective Action groundwater monitoring program). Please ensure the SAP(s) meet the requirements outlined in the Part B Application, Section XI, Attachment C.

Response: A Copy of the current Sampling and Analysis Plan is provided in Attachment F. Upon submittal of the final revised permit application, these will replace the Plans currently included in Appendix XI.C.1.b. and Appendix XI.D.3.

***Comment CP20**, Table XI.E: Provide Table XI.E. because it was omitted. Ensure the information is consistent with the response to CP16.*

Response: Table XI.E is provided in Attachment B.

***Comment CP21**, Table XI.E.1: Please clarify the following items below and revise Table XI.E.1. where necessary:*

a) There is no cost estimate for the on-site pre-treatment of the recovered groundwater or a cost estimate for the disposal of the sludge generated from the on-site pretreatment (Item 3); and

b) There is no off-site transportation cost (Item 2.B) or off-site disposal charge (Item 2.E.(1)) for the recovered and pre-treated groundwater.

Response: These comments are consistent with the intent of the cost estimate as presented. Pretreatment and final treatment for recovered groundwater are part of the refinery's overall wastewater treatment process. The costs of treating recovered groundwater and disposing of any sludges or residuals are negligible compared to the overall operation of the refinery's wastewater system and cannot be determined as a separate cost. No change has been made to the original application.

***Comment CP22**, Table XI.E.2.e [Recovery Wells]:*

a) Please include the number of recovery wells to be sampled as part of the Corrective Action Program under Item 1.C., rather than Item 1.F.;

b) Clarify how it was determined for the number of recovery wells that will be sampled (8), the cost estimate for the sample analysis per well ($55), and revise these values if necessary; and

c) Clarify why the charger per hour is lower to sample the recovery wells ($160/hr) compared to all other wells at the site ($205/hr).

Response:

a) The information has been transferred from item 1.F to item 1.C.

b) The cost estimate for recovery well analytical was based on a quote from the contracted laboratory. However, a new cost estimate was provided in January 2025. The analytical cost per well has accordingly been revised to $60 and the total analytical cost has been commensurately revised.

c) The cost shown ($160 for recovery wells, $205 for all other wells) is a cost per well, not per hour. Because the recovery wells already have pumps in place, they can be sampled more quickly than other wells on-site. The hours per well and cost to sample each well have been updated in the table.

The revised cost estimate is included in Attachment G.

***Comment CP23**, Table XI.E.2.e [Groundwater Region 7 PMZ]: Per Permit Provision XI.B.2.d., supplemental wells are not regularly sampled and are usually only used to gauge the hydrogeologic conditions of the aquifer. Therefore, please revise the three attenuation*

monitoring point (AMP) wells that will be sampled as part of the Corrective Action Program as "Corrective Action Observation [CAO] Wells" (Item 1.D).

Response: The three AMP wells have been moved from Item 1.F to item 1.D as requested. The revised cost estimate is included in Attachment G.

***Comment CP24**, Table XI.E.2.e [Site-Wide PMZ]:*

a) Per the July 2024 semi-annual groundwater report, it appears that there are at least 10 CAO wells for the Site-Wide PMZ. Please revise Item 1.D. and all corresponding entries in Item 2; and

b) Please add to the cost estimate in Item 1 the PMZ's AMP wells and list these wells as CAO wells.

Response:

a) The correct number is 10 CAO and 4 AMP wells. Item 1.D and all corresponding entries in Item 2 have been updated to reflect 14 total wells.

b) The AMP wells were shown in item 1.F (supplemental wells) and have been moved to item 1.D as requested. Item 1.F has been zeroed out.

The revised cost estimate is included in Attachment G.

***Comment CP25**, Table XI.E.2.e [West Property Groundwater PMZ]: Revise the table to include:*

a) The correct number of CAO wells, POE wells (which are the APOE wells for the PMZ), and supplemental wells for the Corrective Action Program;

b) Two semi-annual sampling events for the cost estimate in Item 1;

c) The Annual Administrative Cost (Item 4); and

d) Inspection and maintenance costs for the Corrective Action Program (Item 5).

Response:

a) Currently, only APOE wells (5) and AMP wells (8) are designated for the West Property. Nine other wells in the West Property sampling program are included as CAO wells on Table XI.E.2.e.

b) Table XI.E.2.e has been updated with two semi-annual events for at the West Property for the cost estimate in Item 1.

c) The annual Administrative Cost has been added to Item 4 of Table XI.E.2.e for the West Property.

d) Inspection and maintenance costs have been added to Item 5 of Table XI.E.2.e for the West Property.

The revised cost estimate is included in Attachment G.

***Comment CP26**, XI.E. and Table XI.E.3. [all release areas]:*

a) Clarify why 20 years was used as the "total years" to calculate the financial assurance for the Compliance Monitoring and Corrective Action Programs. Please note that the

total years to calculate the financial assurance for each release area is based on the longest time frame of:

i. the duration of your Compliance Plan (i.e., 10 years);

ii. the estimated time frame for clean-up based on model projections and historical data as approved by the Executive Director (or a maximum of 30 years); or

iii. the compliance period for the unit/area (this applies to RCRA regulated units only).

b) Provide one additional Table XI.E.3. that shows the total costs for all release areas subject to the RCRA Corrective Action and Compliance Monitoring Programs; and

c) Revise all applicable individual "Table XI.E.3" tables and the response text in Section XI.E. based on the comments in CP20 through CP26.

Response:

a) Based on the clarification provided in this comment, PRSI has revised the timeframe to 30 years for all units and updated Table XI.E.3 and CP Table VI accordingly.

b) The additional Table XI.E.3 is provided in Attachment F.

c) Table XI.E.3 has been revised for the Ponds Waste Management Area, Groundwater Region 7, the Site-Wide PMZ, Moat, Recovery Wells, and West Property. The cost estimate summary in XI.E of Part B has been revised based on Comments CP20 through CP26.

The revised cost estimate is included in Attachment G.

In addition to the items noted above, this submittal includes supplemental changes to the permit application reflecting TCEQ's recent consolidation of the three NORs associated with the permit. NORs 30582 (West Property Pulp Mill) and 86155 (West Property Paper Mill) have been integrated into NOR 30311 (PRSI Refinery). Therefore, PRSI has integrated this consolidation into Tables XI.A.1, CP 1, and CP2 in Attachment C and is also supplying a revised Preliminary Review Checklist and Facility Review Checklist reflecting updated NOR numbers for units located on the West Property in Attachment H.

Please contact me at [redacted] or 302.781.6060 if you have any questions.

Sincerely**,**

AECOM

Maureen McBride

Maureen McBride
Environmental Compliance
AECOM
T: 1 (302) 781-6060
E: [redacted]

Revised Pages in Response to Texas Commission on Environmental Quality Compliance Plan NOD 1

Application for Permit Renewal
Pasadena Refinery System, Inc.
Pasadena, Harris County, Texas

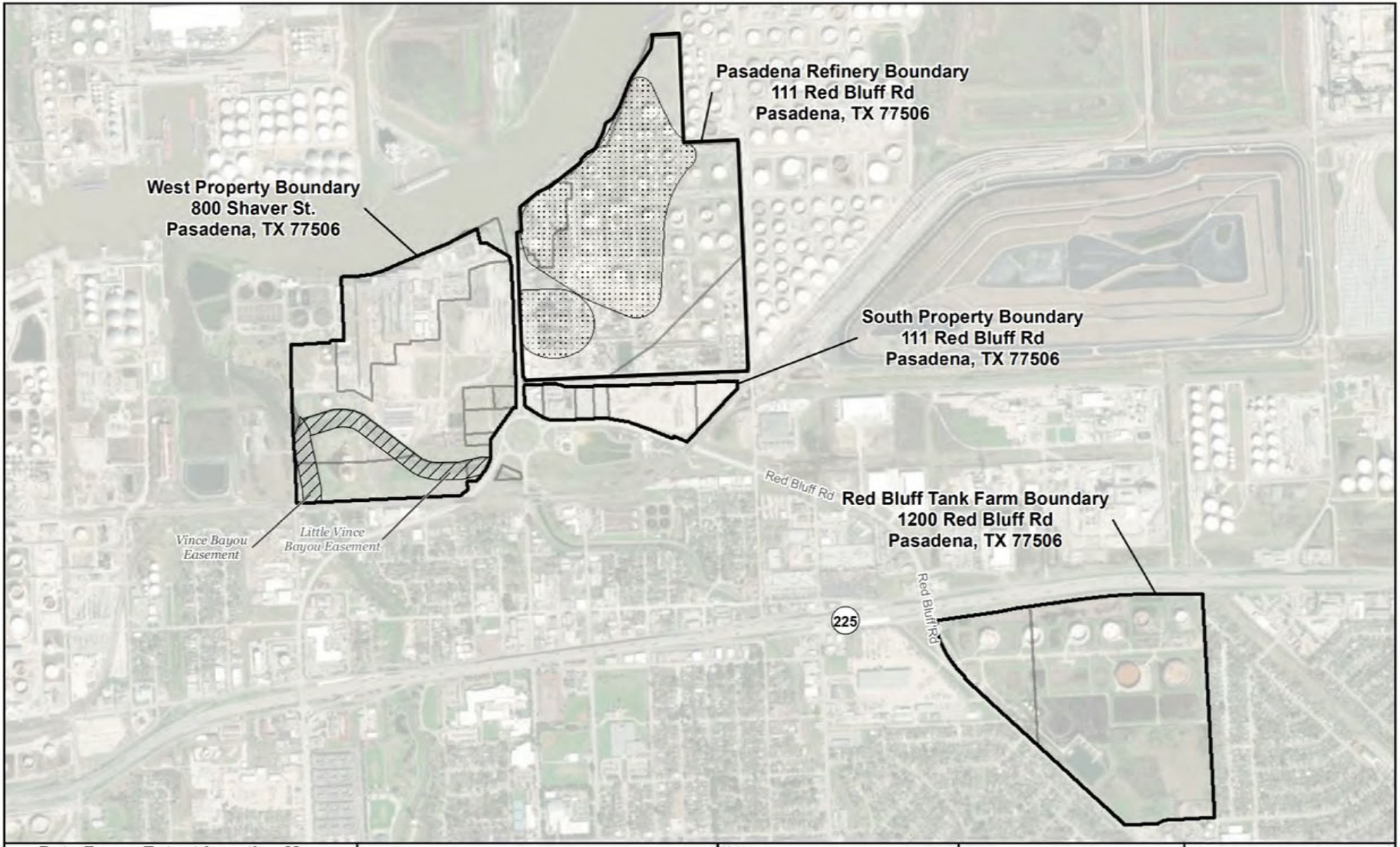
EPA ID # 008091290
Solid Waste Registration No. 30311
Hazardous Waste Permit and Compliance Plan No. 50112
Tracking No. 30191241

Prepared for:
Chevron

Prepared by:
AECOM
248 Chapman Road
Suite 101
Newark, DE 19702

Project No.: 60726317
Date: May 2025

Attachment A
Revised Figures



Data Frame Extent Location Map

Legend

- Plume Management Zone
- Site Bcundary Line
- County Tax Parcel
- Tracts included in facility boundary for Corrective Action purposes only

Notes:
2022 Vivid Advanced Imagery Source: Maxar

0 750 1,500
Feet
1 inch = 1,500 feet

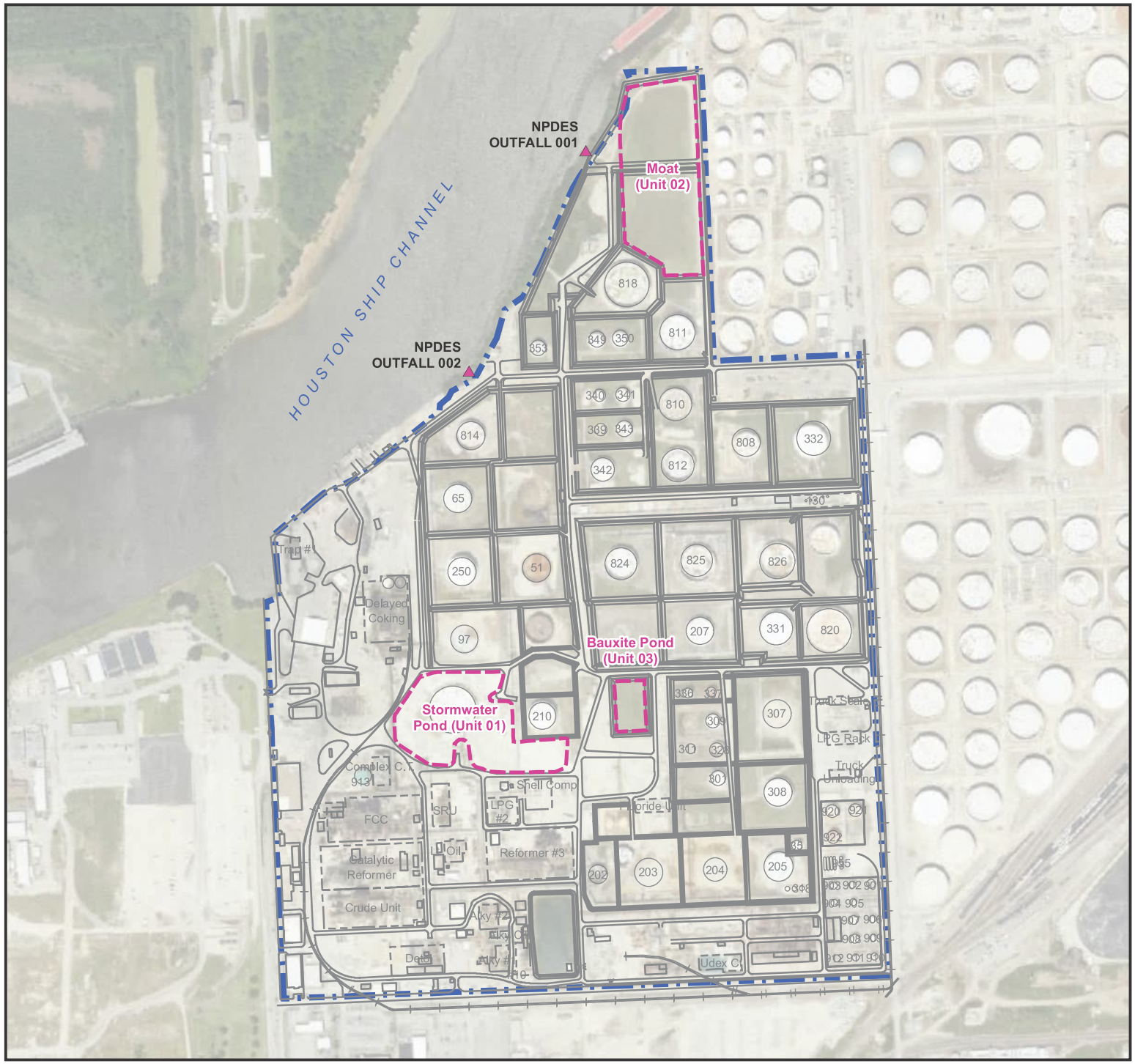
MAP FORMATTED FOR "A" (8.5" X 11") SIZE SHEET. TEXT SCALE NOT VALID FOR DIFFERENT PAGE SIZE

AECOM
248 Chapman Road
Suite 101
Newark, DE 19702

PRSI RCRA Permit Modification – South Property
Pasadena, Texas

CP Attachment A, Sheet 1 of 10 - Facility Map

TASK NUMBER:	PROJECT NUMBER:
1.2	60704290
DESIGNED BY:	DATE:
M. MCBRIDE	9/17/2024
DRAWN BY:	FIGURE NUMBER:
C. DUFFY	Attachment A Sheet 1
DATA QUALITY CHECK BY:	
M. MCBRIDE	



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AECOM
19219 KATY FREEWAY
SUITE 100
HOUSTON, TX 77094
PH: (281) 646-2400

Title: **CP Attachment A, Sheet 2 of 10 Location of Hazardous Waste Management Units**

Project: PRSI RCRA Permit Modification Pasadena, Texas

Client: **Chevron**

Drawn by:	Date:	Chk'd by:	Date:
KPL	7/25/2024	MMcB	7/25/2024

Project No.:	File Name:	Attachment:
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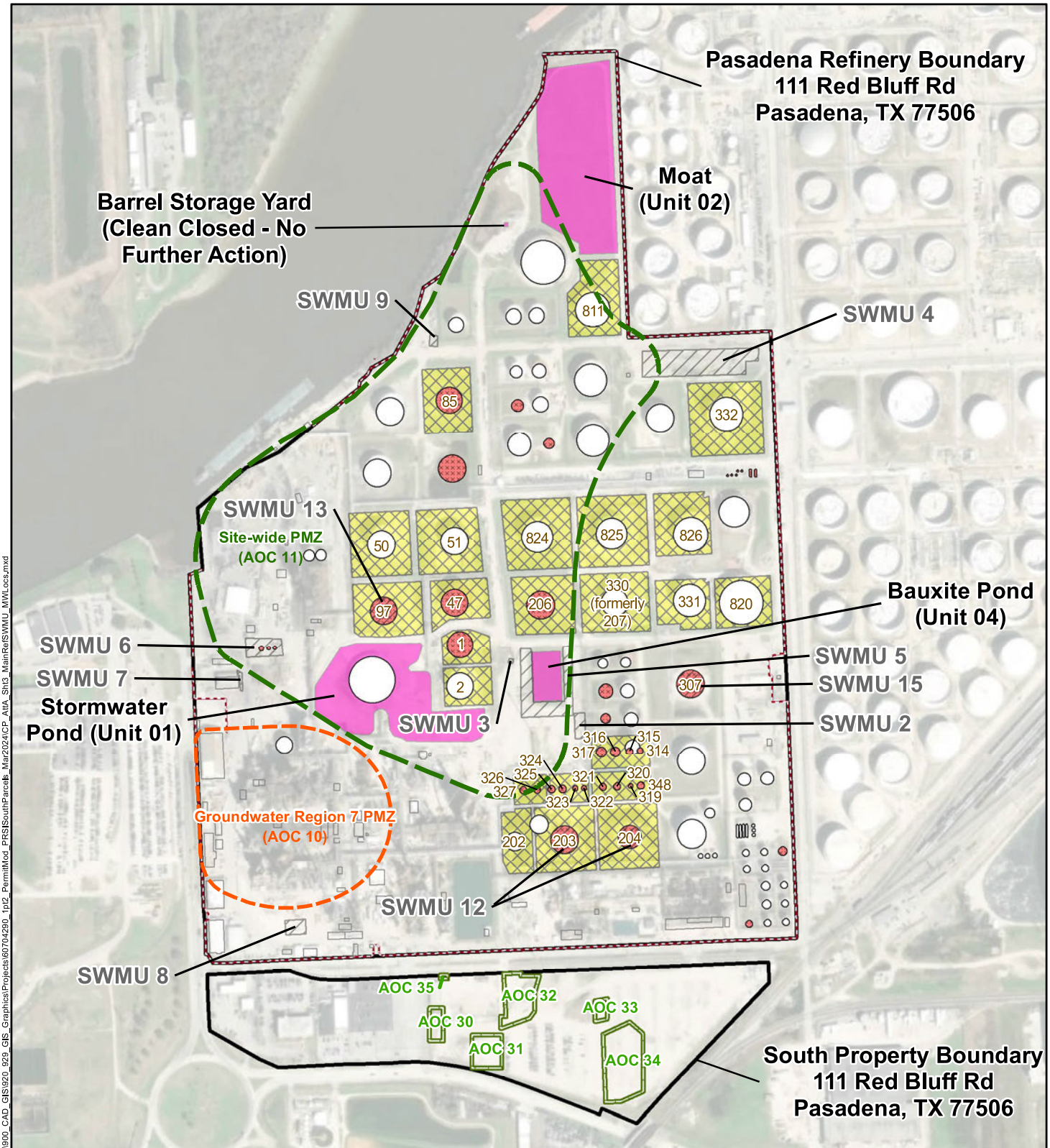

Legend

- SWMU 1
- SWMU (Other - as noted)
- Areas of Concern
- Inactive Hazardous Waste Management Unit
- Site Boundary Line
- Site Structure
- Site-Wide Plume Management Zone
- Region 7 Plume Management Zone
- Existing Tank
- Former Tank
- Fence

Notes:
2022 Vivid Advanced Imagery Source: Maxar

0 300 600
Feet
1 inch = 600 feet

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248 Chapman Road
Suite 101
Newark, DE 19702

PRSI RCRA Permit
Pasadena, Texas

CP Attachment A, Sheet 3 of 10 - Main Refinery and South Property WMU, SWMU, and AOC Locations

TASK NUMBER:	PROJECT NUMBER:
1.2	60753428
DESIGNED BY: M. MCBRIDE	DATE: 5/13/2025
DRAWN BY: K. LYNCH	FIGURE NUMBER: Attachment A Sheet 3
DATA QUALITY CHECK BY: M. MCBRIDE	

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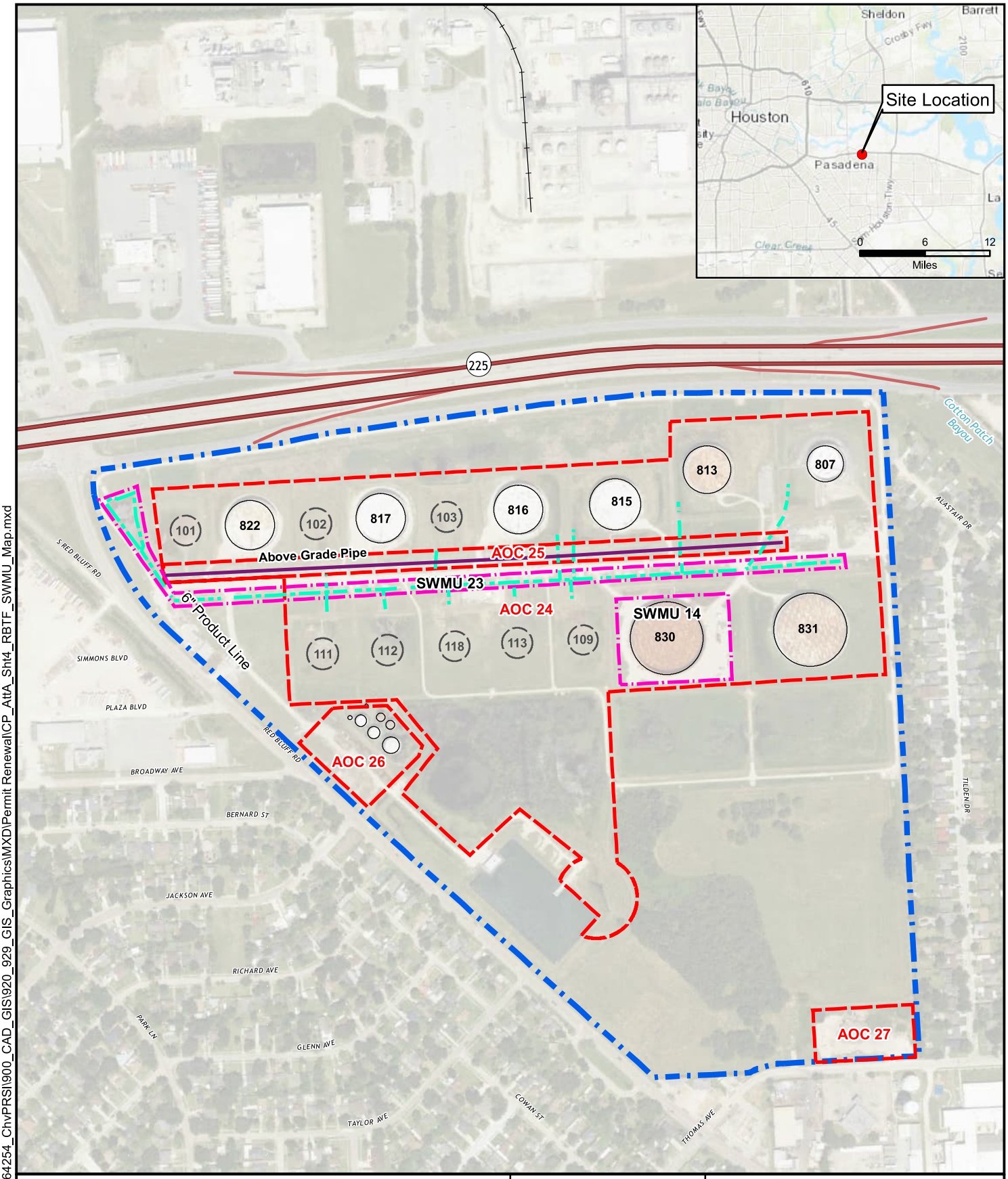

Legend

- Above Grade Pipe
- Storm Water Ditch
- Area of Concern (AOC)
- Solid Waste Management Unit (SWMU)
- Site Boundary

N

0 250 500 1,000

Feet

AECOM

800 GESSNER ROAD, SUITE 1200
HOUSTON, TX 77024
PH: (281) 646-2400

Scale:	Drawn by:	Date:
As Shown	KPL	4/2/2025
	Chk'd by: MMcB	Date: 4/2/2025

Title: **CP Attachment A, Sheet 4 of 10**
Red Bluff Tank Farm SWMU Locations

Project: PRSI RCRA Permit Modification
Pasadena, Texas

Client: **Chevron**

Project No.:	File Name:	Attachment:
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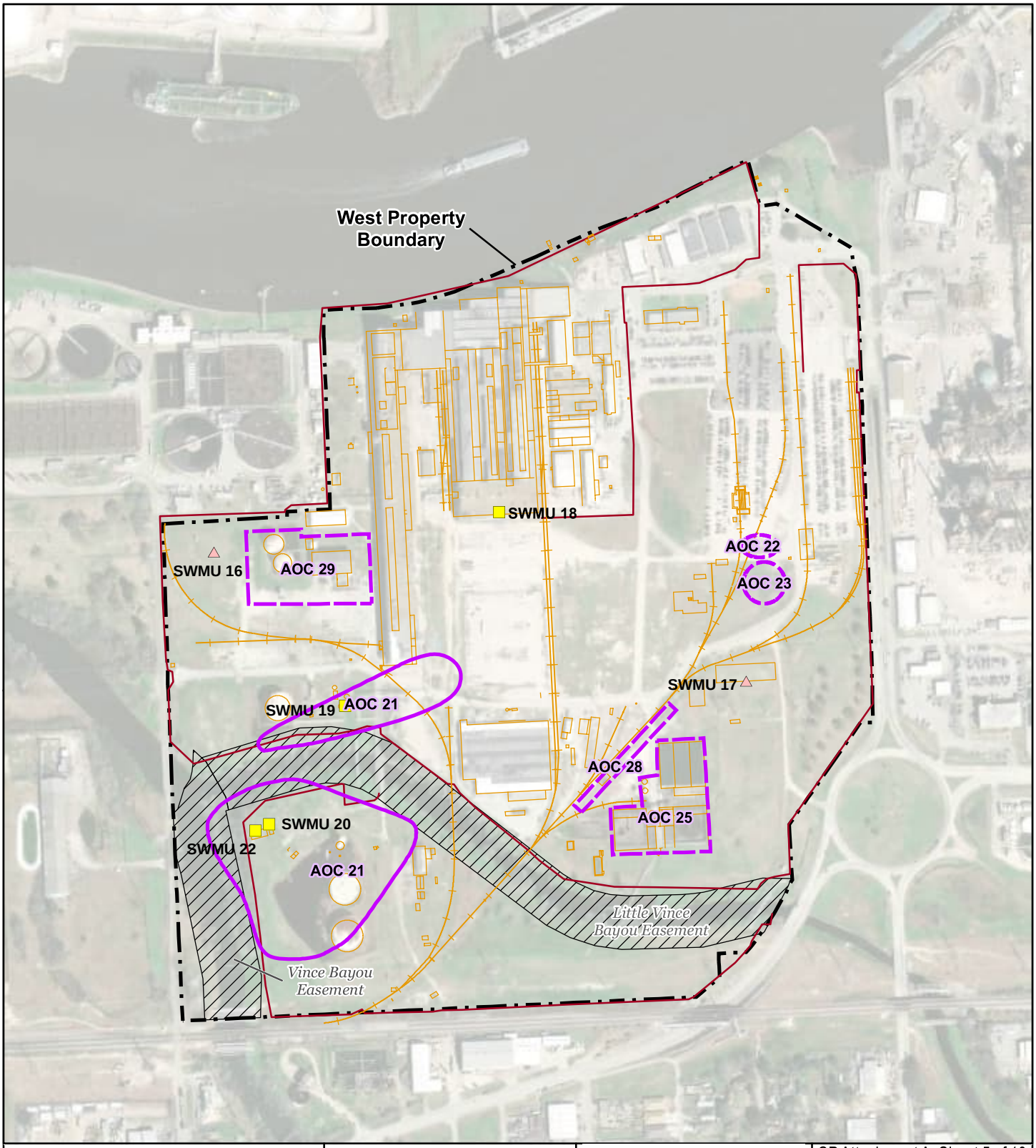

Legend

Waste Management Unit

- Closure in accordance with RAP
- Closure in accordance with Work Plan Schedule
- Fence
- Railroad Tracks
- Site Structure
- Groundwater AOC
- Area of Concern
- West Property Site Boundary Line
- Tracts included in facility boundary for Corrective Action purposes only

Note:
2022 Vivid Advanced Imagery Source: Maxar

0 250 500
Feet
1 inch = 500 feet

MAP FORMATTED FOR "A" (8.5" X 11") SIZE SHEET.
TEXT SCALE NOT VALID FOR DIFFERENT PAGE SIZE.

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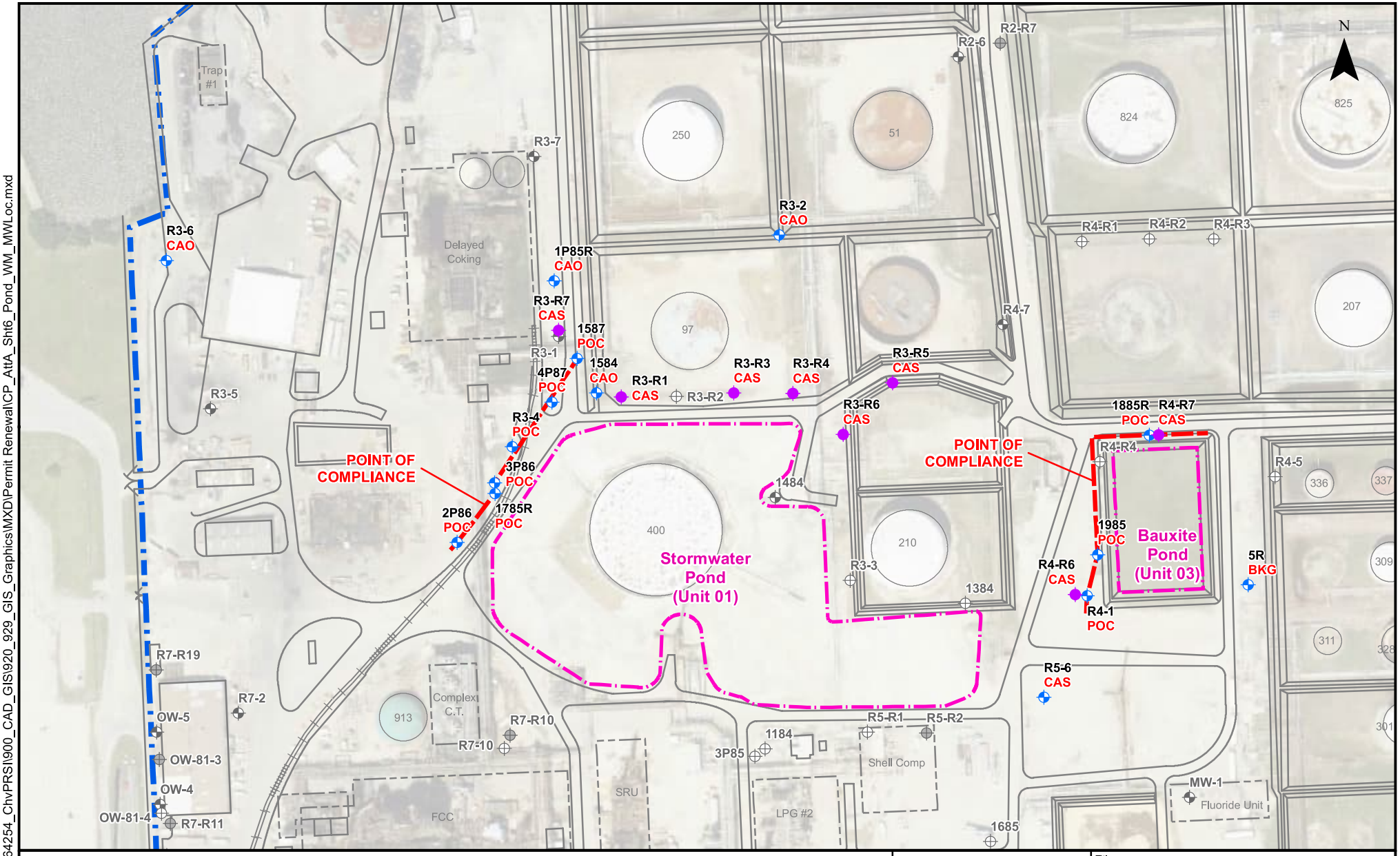
248 Chapman Road
Suite 101
Newark, DE 19702

PRSI RCRA Permit Modification – West Property
Pasadena, Texas

CP Attachment A, Sheet 5 of 10
- West Property WMU and Monitoring Well Locations

TASK NUMBER:	PROJECT NUMBER:
1.2	60704290
DESIGNED BY:	DATE:
M. MCBRIDE	4/11/2025
DRAWN BY:	FIGURE NUMBER:
K. LYNCH	Attachment A Sheet 5
DATA QUALITY CHECK BY:	
M. MCBRIDE	



Legend

- Ponds WMA Monitoring Well
- Ponds WMA Recovery Well
- Monitoring Well
- Observation Well
- Recovery Well
- Point of Compliance
- Hazardous Waste Management Unit
- Site Boundary

0 100 200 400
Feet

BKG - Background
POC - Point of Compliance
CAO - Corrective Action Observation
CAS - Corrective Action System (Recovery)

Image: TxGIO Texas Imagery Service
Date: April 16, 2023

AECOM
800 GESSNER ROAD, SUITE 1200
HOUSTON, TX 77024
PH: (281) 646-2400

Title: **CP Attachment A Sheet 6 of 10 Well Location Map – Pond WM Area**

Project: PRSI RCRA Permit Modification Pasadena, Texas

Client: **Chevron**

Scale:	Drawn by:	Date:	Project No.:	File Name:	Attachment:
As Shown	KPL	4/3/2025	60753428	CP_AttA_Sht6_Pond_WM_MWLoc.mxd	A-6
	Chk'd by: MMcB	Date: 4/3/2025			

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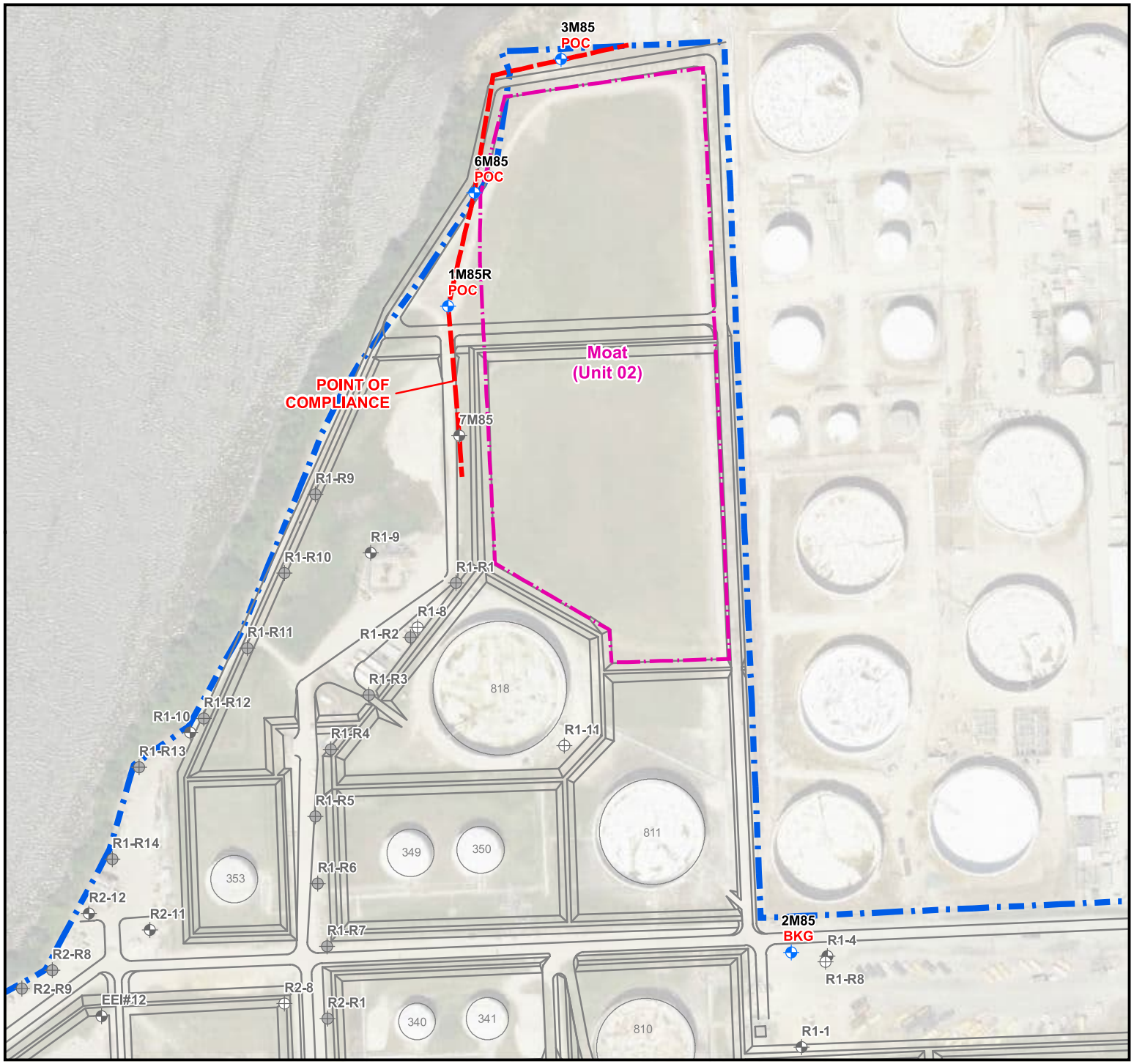

Legend

- Moat Area Monitoring Well
- Monitoring Well
- Observation Well
- Recovery Well
- Point of Compliance
- Hazardous Waste Management Unit
- Site Boundary

BKG - Background
POC - Point of Compliance
CAO - Corrective Action Observation
CAS - Corrective Action System (Recovery)

Image: TxGIO Texas Imagery Service
Date: April 16, 2023

N

0 100 200 400

Feet

AECOM
800 GESSNER ROAD
SUITE 1200
HOUSTON, TX 77024
PH: (281) 646-2400

Title:
CP Attachment A Sheet 7 of 10
Well Location Map – Moat Area

Project:
PRSI RCRA Permit Modification
Pasadena, Texas

Client:
Chevron

Drawn by:	Date:	Chk'd by:	Date:
KPL	4/3/2025	MMcB	4/3/2025

Project No.:	File Name:	Attachment:
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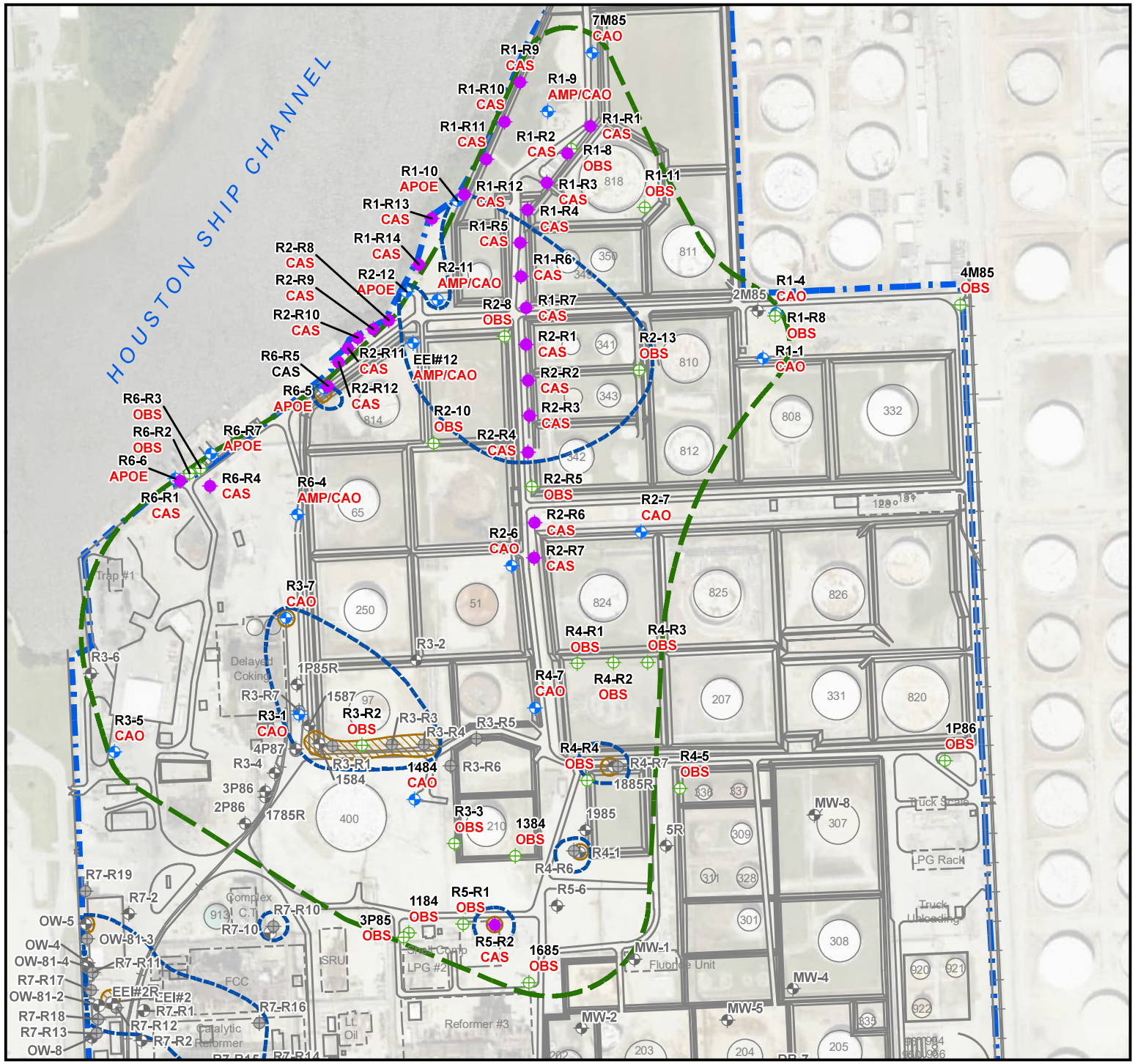

Legend

- PMZ Monitoring Well
- PMZ Observation Well
- PMZ WMA Recovery Well
- Monitoring Well
- Observation Well
- Recovery Well
- PCLE Zone
- Extent of LNAPL (2024)
- Site-Wide Plume Management Zone
- Site Boundary

APOE - Alternate Point of Exposure
AMP - Attenuation Monitoring Point
CAO - Corrective Action Observation
CAS - Corrective Action System (Recovery)
OBS - Observation Well

Image: TxGIO Texas Imagery Service
Date: April 16, 2023

N

0 200 400 800
Feet

AECOM
800 GESSNER ROAD
SUITE 1200
HOUSTON, TX 77024
PH: (281) 646-2400

Title: **CP Attachment A Sheet 8 of 10 Well Location Map – Site-Wide Groundwater PMZ**

Project: PRSI RCRA Permit Modification
Pasadena, Texas

Client: Chevron

Drawn by:	Date:	Chk'd by:	Date:
KPL	4/14/2025	MMcB	4/14/2025

Project No.:	File Name:	Attachment:
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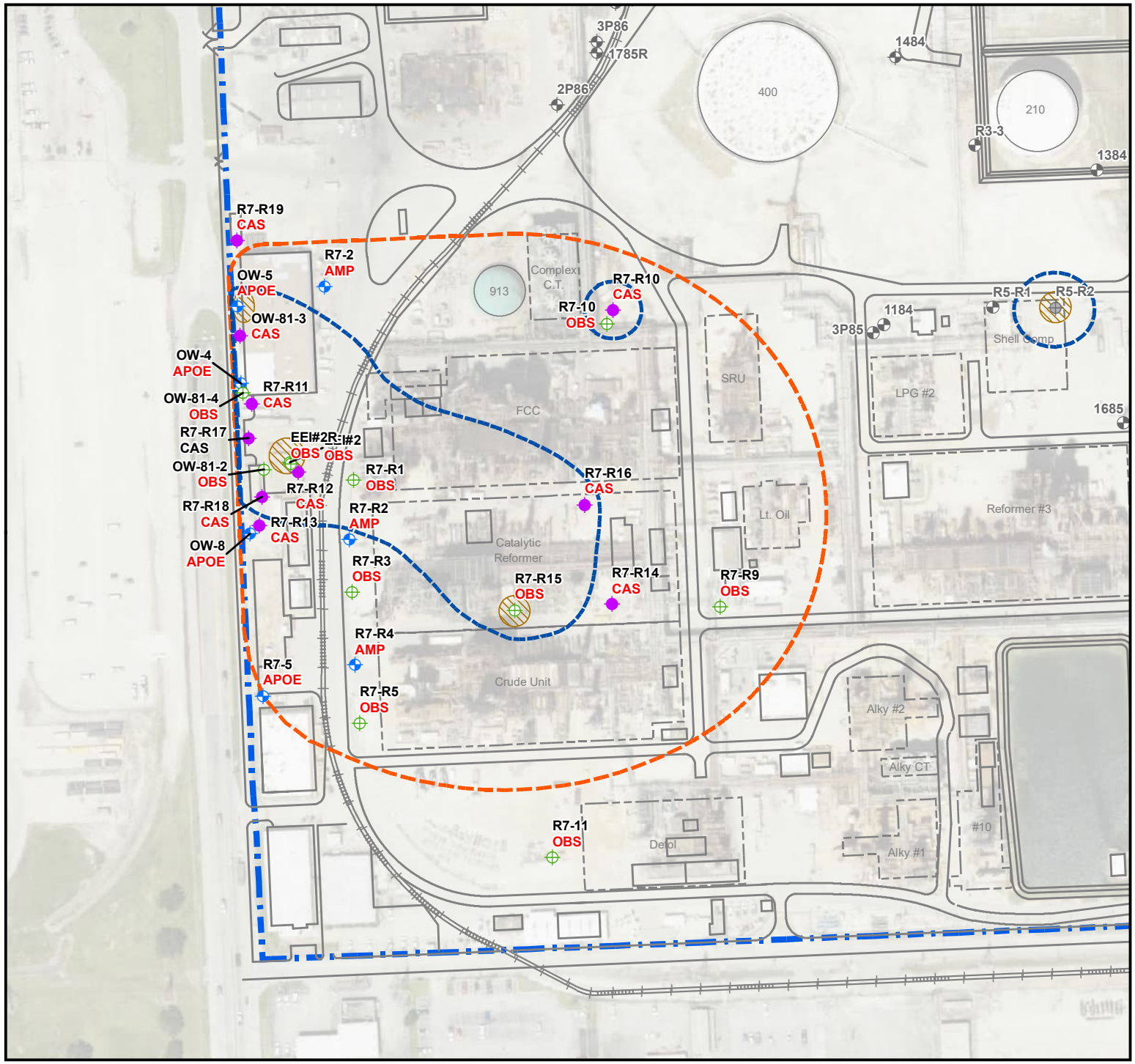

Legend

- Region 7 PMZ Monitoring Well
- Region 7 PMZ Observation Well
- Region 7 PMZ WMA Recovery Well
- Monitoring Well
- Observation Well
- Recovery Well
- PCLE Zone
- Extent of LNAPL (2024)
- Region 7 Plume Management Zone
- Site Boundary

APOE - Alternate Point of Exposure
AMP - Attenuation Monitoring Point
OBS - Observation Wells
CAS - Corrective Action System (Recovery)

Image: TxGIO Texas Imagery Service
Date: April 16, 2023

N

0 100 200 400
Feet

AECOM
800 GESSNER ROAD
SUITE 1200
HOUSTON, TX 77024
PH: (281) 646-2400

Title: **CP Attachment A Sheet 9 of 10**
Well Location Map
Groundwater Region 7 PMZ

Project:
PRSI RCRA Permit Modification
Pasadena, Texas

Client:
Chevron

Drawn by:	Date:	Chk'd by:	Date:
KPL	4/14/2025	MMcB	4/14/2025

Project No.:	File Name:	Attachment:
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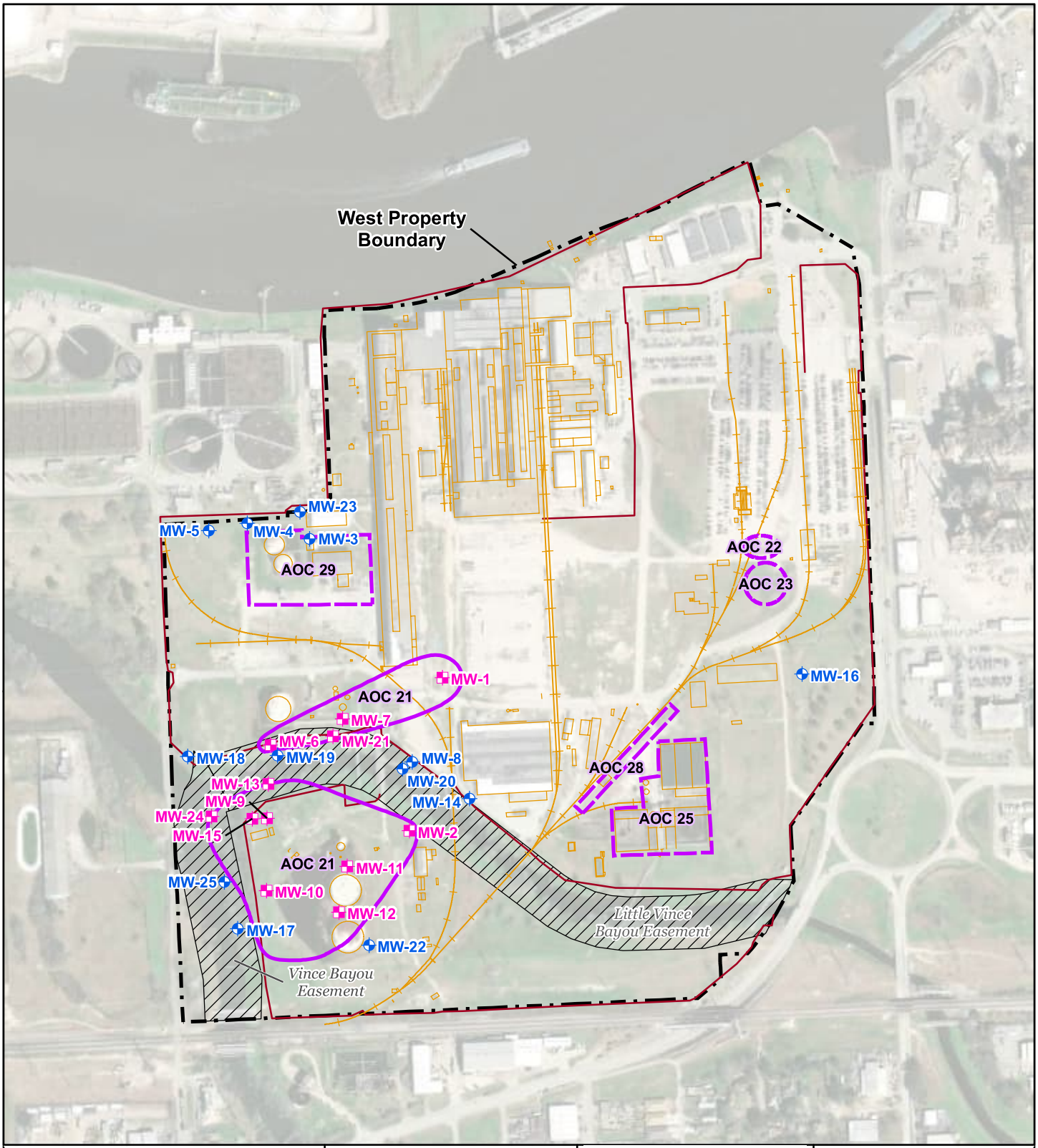


Legend

- West Property Monitoring Well
- West Property PMZ Well
- Fence
- Railroad Tracks
- Site Structure
- West Property Groundwater PMZ
- Area of Concern
- West Property Site Boundary Line
- Tracts included in facility boundary for Corrective Action purposes only

Notes:

2022 Vivid Advanced Imagery Source: Maxar

0 250 500

Feet

1 inch = 500 feet

MAP FORMATTED FOR "A" (8.5" X 11") SIZE SHEET. TEXT SCALE NOT VALID FOR DIFFERENT PAGE SIZE.

AECOM
248 Chapman Road
Suite 101
Newark, DE 19702

PRSI RCRA Permit Modification – West Property
Pasadena, Texas

CP Attachment A, Sheet 10 of 10 - West Property PMZs and Monitoring Well Locations

TASK NUMBER:	PROJECT NUMBER:
1.2	60704290
DESIGNED BY: M. MCBRIDE	DATE: 4/11/2025
DRAWN BY: K. LYNCH	FIGURE NUMBER: Attachment A Sheet 10
DATA QUALITY CHECK BY: M. MCBRIDE	

Attachment B
Supporting Documents

Kathleen Hartnett White, *Chairman*
Larry R. Soward, *Commissioner*
Glenn Shankle, *Executive Director*

1HW
30311 - CO

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

September 7, 2006

Mr. Faheem Kazimi
Manager of Health Safety and Environmental
Pasadena Refining System, Inc.
111 Red Bluff Road
Houston, Texas 77506

Re: Response to TCEQ 12 August 2005 Comments, dated May 5, 2006
Pasadena Refining System, Inc. (a.k.a. Crown Central Petrol. Corp.) - Pasadena , Harris County
TCEQ SWR No. 30311
TCEQ Hazardous Waste Compliance Plan No. CP - 50112-000
EPA ID No. TXD008091290

Dear Mr. Kazimi:

The Texas Commission on Environmental Quality (TCEQ) conducted a review of the Pasadena Refining System, Inc. (Pasadena Refining) file on the above referenced site. Based on our review, the TCEQ accepts Pasadena Refining System's approach to remedying the site. No further action is required for the No. 2 Trap Sump. Please proceed with the submittal of the Tier II Ecological Risk Assessment to complete the CMS.

Please be aware that it is the continuing obligation of persons associated with a site to ensure that municipal hazardous waste and industrial solid waste are managed in a manner which does not cause the discharge or imminent threat of discharge of waste into or adjacent to waters in the state, a nuisance, or the endangerment of the public health and welfare as required by 30 TAC §335.4. If the cleanup or remediation fails to comply with these requirements, the burden remains upon the facility to take any necessary and authorized action to correct such conditions.

Please contact me at [redacted] or at (512) 239-2992 if you need additional information. Thank you for your cooperation in this matter.

Chris Siegel, Project Manager
Team I, Environmental Cleanup Section II
Remediation Division
Texas Commission on Environmental Quality

RECEIVED
SEP 11 2006
TCEQ
CENTRAL FILE ROOM

CS/cs

cc: Waste Program Manger, TCEQ Region 12 Office, Houston

JOHN SORRELS
C. Bill Richardson - Exit

Original: W. L. Warnement
Copies: M. M. Meyer
P. F. Hodges
R. M. Trembly

3/26/92

John Hall, Chairman
Pam Reed, Commissioner
Peggy Garner, Commissioner

TEXAS WATER COMMISSION

PROTECTING TEXANS' HEALTH AND SAFETY BY PREVENTING AND REDUCING POLLUTION

March 20, 1992

Mr. A. P. Caldwell, Jr.
Crown Central Petroleum Corporation
P.O. Box 1759
Houston, Texas 77251

Re: Acceptance of Closure Certifications for the Moat and the Bauxite Pond
Hazardous Waste Permit No. HW-50112-000

Dear Mr. Caldwell:

This is to inform you that our review of the closure certification reports dated October 11, 1990 and April 9, 1991 for the Crown facility units designated as the Bauxite Pond and the Moat (Texas Water Commission Permit Unit II.B.1) is complete. Based on the information contained in the certification reports, it appears that the activities conducted to achieve closure of these units are in compliance with the applicable requirements of permit Provision IV.B. and that closure certification has been performed in accordance with permit Provisions IV.B.4.a. and V.U.1. Therefore, this letter constitutes acceptance by the Executive Director of your closure certification.

Please be aware that it is Crown's continuing obligation to assure that the disposal of industrial solid or municipal hazardous waste is managed in such a way that it does not cause the discharge or imminent threat of discharge of waste into or adjacent to waters of the state, a nuisance or the endangerment of the public health and welfare as stated in 31 Texas Administrative Code Section 335.4. If the closure activities do result in a discharge or threat of discharge of waste, a nuisance or endangerment to human health and welfare, the burden remains upon Crown to submit an amendment to the closure plan and to take any necessary and authorized action to correct such conditions.

If you have any questions or comments, please contact me at 512/463-7969.

Sincerely,

Susie Frizlen

Susie Frizlen
Permits Section
Industrial and Hazardous Waste Division

cc: TWC District 7 Office - Houston

RECEIVED
MAR 23 1992
A. P. CALDWELL, JR.

++

CD

Notice

STATE OF TEXAS
COUNTY OF HARRIS

031-04-1110

Notice of Closed Solid Waste Management Units 04/08/91 00672572 N085050 $ 323.00

N085050

Pursuant to 31 TAC 335.5 (c) of the Solid Waste Regulations of the Texas Water Commission (TWC) this notice is hereby filed in the Real Property Records of Harris County, Texas.

I. The attached Survey Plats depict a portion of Crown Central Petroleum Corporation's Houston Refinery in the Deed dated 19th Day of February 1919, and recorded in Volume 415, Page 429-431 of the Real Property Records of Harris County, Texas.

II. The tracts shown on the attached Survey Plats as the Bauxite Pond Site and the Moat site have been used to manage hazardous waste.

323
4

III. The Bauxite Pond was a surface impoundment used to manage wastes with U. S. Environmental Protection Agency (EPA) Hazardous Waste Numbers D002 and K050. All hazardous waste except the liner and any contaminated soils have been removed from the Bauxite Pond during closure. Any remaining hazardous waste would have EPA Hazardous Waste No. K050. The closed Bauxite Pond Site contains TWC Class II industrial solid waste.

The Moat was a surface impoundment used to manage wastes with EPA Hazardous Waste Numbers D007, K049, K050, and K051. Due to the nature of past operations it is not possible to determine the precise quantity and location of these hazardous wastes within the closed unit. The Moat Site also contain TWC Class I and Class II non-hazardous wastes.

IV. Use of the tracts depicted on the attached Survey Plats is restricted by 40 CFR 264 Subpart G regulations.

V. Another copy of the attached Survey Plats will be forwarded to the Region VI Administrator of the EPA and the Executive Director of the TWC as per 40 CFR 264.119(b)(2) and 31 TAC 335.5(c).

Executed this 5th day of April, 1991 by Mr. A. P. Caldwell, Jr., Vice President - Refining, Crown Central Petroleum Corporation.

FILED
91 APR -8 PM 2:56
COUNTY CLERK
HARRIS COUNTY, TEXAS

A. P. Caldwell, Jr.
A. P. CALDWELL, JR.
VICE PRESIDENT - REFINING
CROWN CENTRAL PETROLEUM CORPORATION
P. O. Box 1759, Houston, TX. 77251

10
1/2

STATE OF TEXAS
COUNTY OF HARRIS

CAROL F. HAGER NOTARY PUBLIC STATE OF TEXAS EXPIRES 6-12-94

This instrument was acknowledged before me on this 5th day of April, 1991 by A. P. Caldwell, Jr., Vice President - Refining of Crown Central Petroleum Corporation, A Maryland Corporation, on behalf of said Corporation.

Carol F. Hager
NOTARY PUBLIC STATE OF TEXAS

Kt
John Jones
Crown Central Petroleum Corp.
P.O. Box 1759
Houston, TX 77251

Title Data TC TDI15811 HA N085050.001 REDA

000004

7

20130314012
06/25/2013 RP2 $40.00

NOTICE

STATE OF TEXAS
HARRIS COUNTY

M

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Harris County, Texas in compliance with the recordation requirements of said rules:

I

Pasadena Refining System, Inc. (PRSI) has performed a remediation of the land described herein (Buried Cell near the Bauxite Pond, SWMU 2). A list of the known constituents, including known concentrations, is attached hereto and is made part of this filing (Exhibit A). Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 30311 files, which are available for inspection upon request at the central office of the Texas Commission on Environmental Quality in Austin.

The Texas Commission on Environmental Quality derives its authority to review the remediation of this tract of land from 361.002 of the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361, which enables the Texas Commission on Environmental Quality to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to 5.012 and 5.013 of the Texas Water Code, Texas Water Code Ann. Chapter 5, the Texas Commission on Environmental Quality is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the Texas Commission on Environmental Quality requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the Texas Commission on Environmental Quality of the suitability of this land for any purpose, nor does it constitute any guarantee by the Texas Commission on Environmental Quality that the remediation standards specified in this certification have been met by PRSI.

II

Being a 0.118-acre (5,146 square feet) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas, said 0.118-acre tract being a portion of a 167.33-acre tract of land conveyed to Pasadena Refining System, Inc., as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County Texas and being more particularly described by metes and bounds as provided in Exhibit B. Exhibit B also provides a sketch of said 0.118-acre tract.

ll

Return to: John Jones
PRSI
111 Red Bluff Rd
Pasadena, TX
77506

RP-2013-103437

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION
(Continued)

Contaminants and waste deposited hereon have been remediated to meet industrial/commercial soil criteria, in accordance with a plan designed to meet the Texas Commission on Environmental Quality 's requirements in 30 Texas Administrative Code §335.555 (Risk Reduction Standard No. 3), which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential. The current or future owner must undertake actions as necessary to protect human health or the environment in accordance with the rules of the Texas Commission on Environmental Quality.

III

The owner of the site is Pasadena Refining System, Inc. and its address is 111 Red Bluff Road, Pasadena, Texas 77506, where more specific information may be obtained from the plant manager.

EXECUTED this the 24th day of June, 2013

102

Pasadena Refining System, Inc

Operations Director and COO

STATE OF TEXAS
HARRIS COUNTY

BEFORE ME, on this the 24 day of June, personally appeared Mr. John Edmunds, Operations Director and COO, of Pasadena Refining System, Inc. , known to me to be the person and agent of said corporation whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 24 day of June, 2013.

Iriva Lyn Sturdivant

Notary Public in and for the State of Texas
County of Harris County

IRIVA LYN STURDIVANT
My Commission Expires
February 9, 2014

My Commission Expires
2·9·2014

RP 1187-03-0824

Exhibit A: Table of Soil Concentrations

RP 0847-03-0835

Priority Group 8
(which includes Buried Cell Near Bauxite Pond, Area Immediately Surrounding Bauxite Pond, and Trap #2 Sump)
Known Constituents and Concentrations in Soils
Pasadena Refining Systems, Inc.

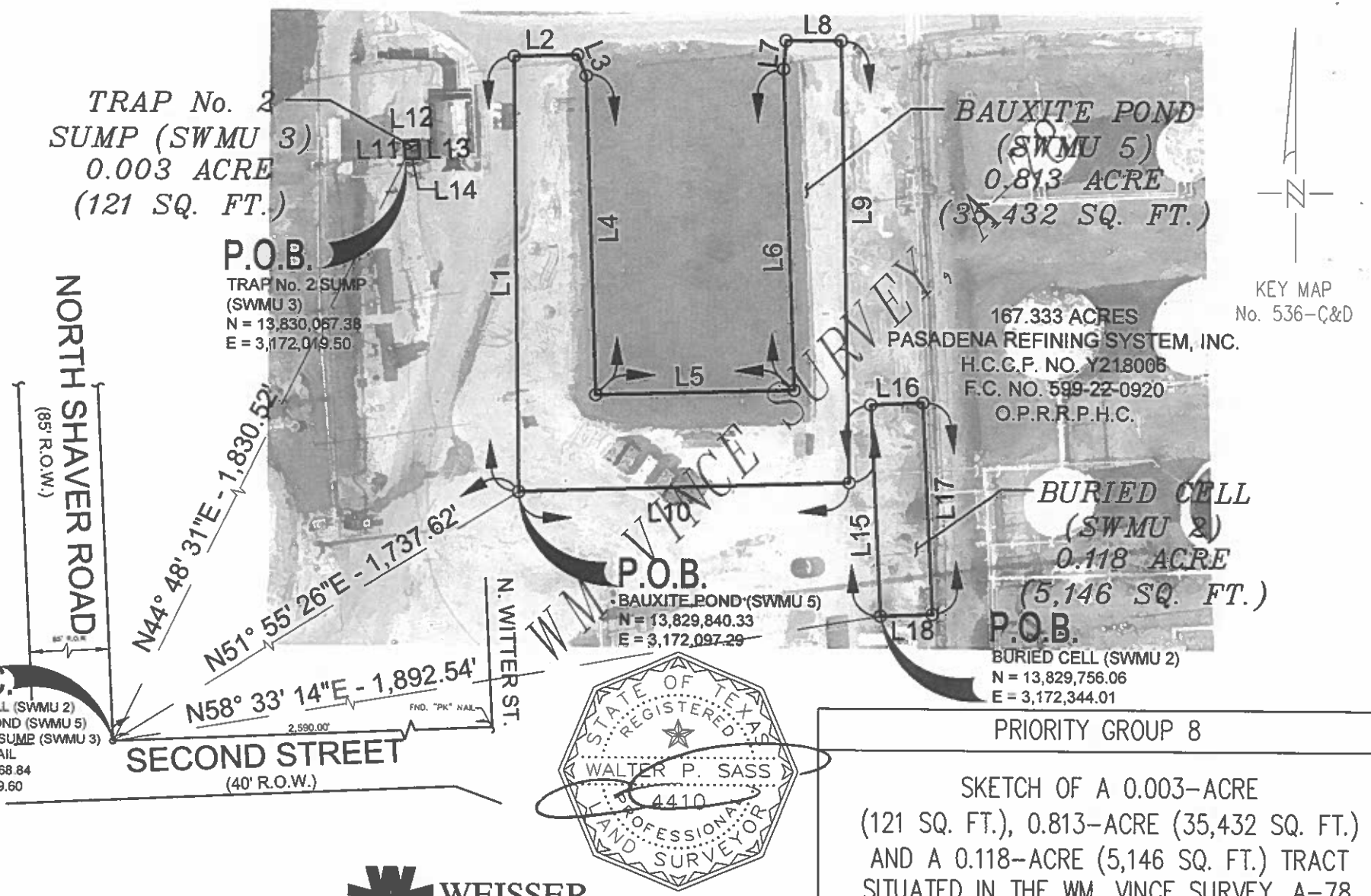
Constituent	Maximum Concentration (mg/Kg)
Total Phenols	16
Barium	760
Cadmium	1.2
Chromium	380
Lead	329
Nickel	40
Zinc	200
Benzene	0.93
Toluene	13
m,p-Xylenes	60
o-Xylenes	26
Benzo(a)anthracene	10
Naphthalene	55

These values are based on sampling efforts conducted in the RCRA Facility Investigation (RFI) program for soils beneath the Solid Waste Management Units, some of which may have been removed or treated or covered with clean backfill material for corrective action in accordance with TCEQ authorization.

Exhibit B: Sketch and Area Metes & Bounds

HP 087-63-0841

RP 087-63-0842



STATE OF TEXAS
REGISTERED
WALTER P. SASS
4410
PROFESSIONAL
LAND SURVEYOR

PRIORITY GROUP 8

SKETCH OF A 0.003-ACRE (121 SQ. FT.), 0.813-ACRE (35,432 SQ. FT.) AND A 0.118-ACRE (5,146 SQ. FT.) TRACT SITUATED IN THE WM. VINCE SURVEY, A-78, HARRIS COUNTY, TEXAS

© Copyright 2013 Weisser Engineering Company, Inc.

BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE TEXAS SOUTH CENTRAL ZONE No. 4204 STATE PLANE GRID COORDINATES (NAD83)

NOTE:
THIS SURVEY IS BEING CREATED SOLELY FOR THE PARTIES HEREIN STATED; NO LICENSE HAS BEEN CREATED, EXPRESS OR IMPLIED, TO COPY THE SURVEY EXCEPT AS IS NECESSARY IN CONJUNCTION WITH THIS TRANSACTION.

WEISSER
Engineering Co.
19500 Park Row, Suite 100
Houston, Texas 77084
(281) 579 - 7300
T.B.P.E.R. #F-68

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT. ALL ENCUMBRANCES MAY NOT BE SHOWN.

REVISION DATE: 04/11/2013

DRAWN BY:	L.W.	CALC'D. BY:	J.H.	SCALE:	1" = 100'
F.B. NO:	2841	CHECKED BY:	M.B.	SHEET	01 OF 02
CREW CHIEF:	B.H.	DATE:	5/21/2013	JOB No.:	CT220 (1908-020)

P:\CT220\dwg\CT220_Tract_Bauxite_Pond.dwg, Layout 1, 05/23/13 9:57:55AM, michalk

BURIED CELL
(SWMU 2)

DESCRIPTION OF A 0.118-ACRE (5,146 SQ. FT.)
TRACT OF LAND SITUATED IN
THE WM. VINCE SURVEY, A-78,
HARRIS COUNTY, TEXAS

Being a 0.118-acre (5,146 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas. Said 0.118-acre tract being a portion of a 167.333-acre tract of land conveyed to Pasadena Refining System, Inc. as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County, Texas, and being more particularly described by metes and bounds as follows with the bearings show hereon based on Texas South Central Zone No. 4204 state plane grid coordinates (NAD 83);

COMMENCING at a "PK" nail found for the intersection of the east right-of-way line of North Shaver Road (85 foot wide right-of-way), and the north right-of-way line of Second Street (40 foot wide right-of-way) and for the southwest corner of said 167.333-acre tract, (with a grid coordinate of N = 13,828,768.84, E = 3,170,729.60);

THENCE North 58° 33' 14" East, over and across said 167.333-acre tract, a distance of 1,892.54 feet to the southwest corner and the **POINT OF BEGINNING** of said tract herein described, (with a grid coordinate of N = 13,829,756.06, E = 3,172,344.01);

THENCE North 02° 38' 32" West, over and across said 167.333-acre tract and with the west line of said tract herein described, a distance of 144.84 feet to a point for the northwest corner of said tract herein described;

THENCE North 87° 32' 38" East, over and across said 167.333-acre tract and with the north line of said tract herein described, a distance of 35.61 feet to a point for the northeast corner of said tract herein described;

THENCE South 02° 33' 04" East, over and across said 167.333-acre tract and with the east line of said tract herein described, a distance of 145.12 feet to a point for the southeast corner of said tract herein described;

THENCE South 87° 59' 24" West, over and across said 167.333-acre tract and with the south line said tract herein described, a distance of 35.38 feet to the **POINT OF BEGINNING** and containing 0.118 acre (5,146 square feet) of land.

Compiled by:

Weisser Engineering Company
19500 Park Row, Suite 100
Houston, Texas 77084

Job No.: CT220 (1908-020)
Date: 5/21/13

RP 037-63-0843

FILED

2013 JUN 25 PM 1:22

Stan Stanart
COUNTY CLERK
HARRIS COUNTY, TEXAS

ANY PROVISION HEREIN WHICH RESTRICTS THE SALE, RENTAL, OR USE OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW.

THE STATE OF TEXAS
COUNTY OF HARRIS

I hereby certify that this instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me; and was duly RECORDED, in the Official Public Records of Real Property of Harris County, Texas

JUN 25 2013

Stan Stanart
COUNTY CLERK
HARRIS COUNTY, TEXAS

HP UBV-63-0844

7

NOTICE

m

20130314011
06/25/2013 RP2 $40.00

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Harris County, Texas in compliance with the recordation requirements of said rules:

I

Pasadena Refining System, Inc. (PRSI) has performed a remediation of the land described herein (Trap No. 2 Sump, SWMU 3). A list of the known constituents, including known concentrations, is attached hereto and is made part of this filing (Exhibit A). Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 30311 files, which are available for inspection upon request at the central office of the Texas Commission on Environmental Quality in Austin.

The Texas Commission on Environmental Quality derives its authority to review the remediation of this tract of land from 361.002 of the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361, which enables the Texas Commission on Environmental Quality to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to 5.012 and 5.013 of the Texas Water Code, Texas Water Code Ann. Chapter 5, the Texas Commission on Environmental Quality is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the Texas Commission on Environmental Quality requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the Texas Commission on Environmental Quality of the suitability of this land for any purpose, nor does it constitute any guarantee by the Texas Commission on Environmental Quality that the remediation standards specified in this certification have been met by PRSI.

II

Being a 0.003-acre (121 square feet) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas, said 0.003-acre tract being a portion of a 167.33-acre tract of land conveyed to Pasadena Refining Systems, Inc., as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County Texas and being more particularly described by metes and bounds as provided in Exhibit B. Exhibit B also provides a sketch of said 0.003-acre tract.

Return to: John Jones
PRSI
111 Red Bluff Rd
Pasadena, TX 7750

RP-UB1-63-UB23

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION
(Continued)

Contaminants and waste deposited hereon have been remediated to meet industrial/commercial soil criteria, in accordance with a plan designed to meet the Texas Commission on Environmental Quality 's requirements in 30 Texas Administrative Code §335.555 (Risk Reduction Standard No. 3), which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential. The current or future owner must undertake actions as necessary to protect human health or the environment in accordance with the rules of the Texas Commission on Environmental Quality.

III

The owner of the site is Pasadena Refining System, Inc. and its address is 111 Red Bluff Road, Pasadena, Texas 77506, where more specific information may be obtained from the plant manager.

EXECUTED this the 24th day of June, 2013

102

Pasadena Refining System, Inc.

John Edmunds
Operations Director and COO

STATE OF TEXAS
HARRIS COUNTY

BEFORE ME, on this the 24 day of June, personally appeared Mr. John Edmunds, Operations Director and COO, of Pasadena Refining System, Inc. , known to me to be the person and agent of said corporation whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 24 day of June, 2013.

Iriva Lyn Sturdivant
Notary Public in and for the State of Texas
County of Harris County

IRIVA LYN STURDIVANT
My Commission Expires
February 9, 2014

My Commission Expires
2.9.2014

RP 087-63-0830

Exhibit A: Table of Soil Concentrations

RP UBT-63-0831

Priority Group 8
(which includes Buried Cell Near Bauxite Pond, Area Immediately Surrounding Bauxite Pond, and Trap #2 Sump)
Known Constituents and Concentrations in Soils
Pasadena Refining Systems, Inc.

Constituent	Maximum Concentration (mg/Kg)
Total Phenols	16
Barium	760
Cadmium	1.2
Chromium	380
Lead	329
Nickel	40
Zinc	200
Benzene	0.93
Toluene	13
m,p-Xylenes	60
o-Xylenes	26
Benzo(a)anthracene	10
Naphthalene	55

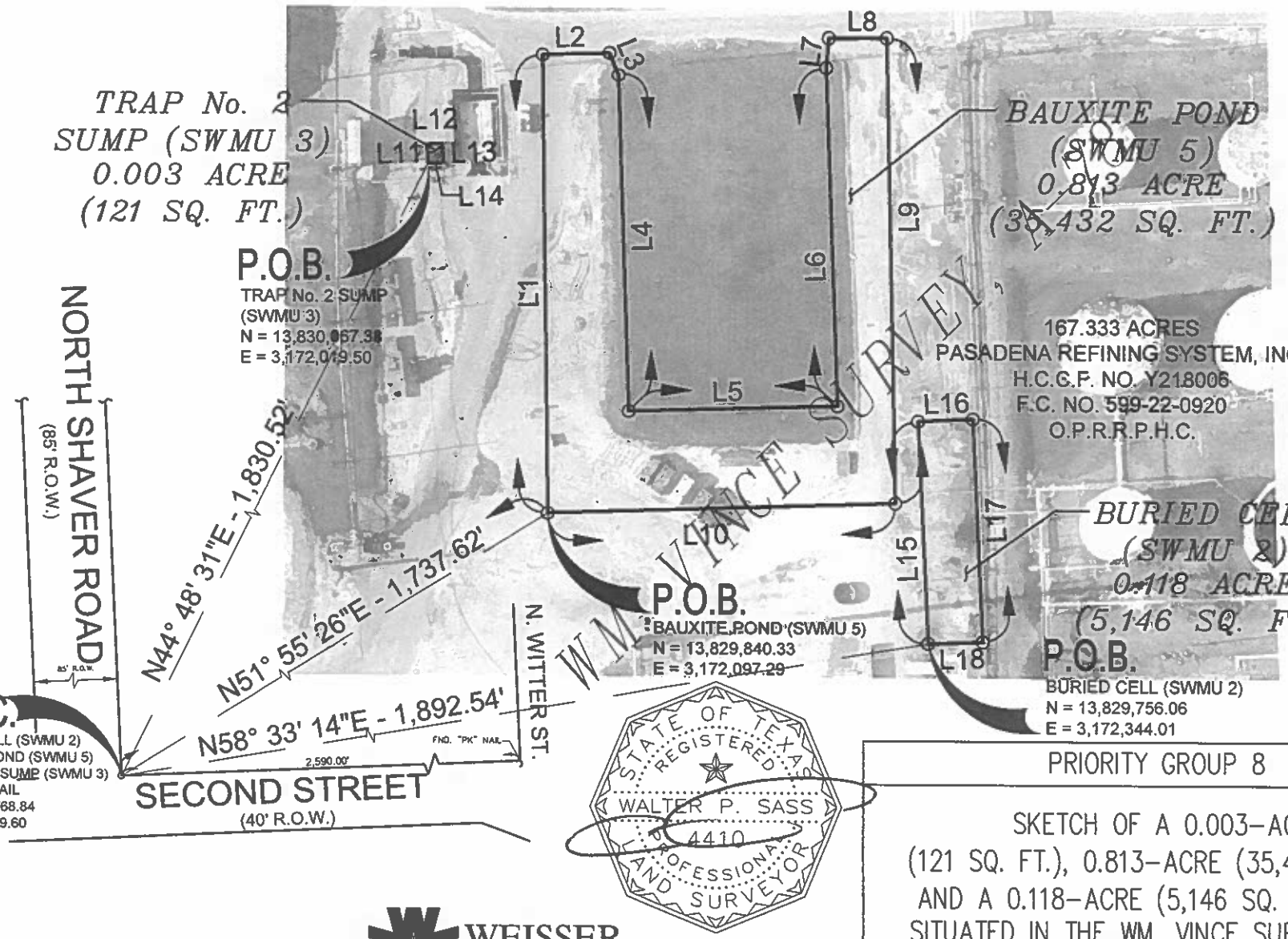
These values are based on sampling efforts conducted in the RCRA Facility Investigation (RFI) program for soils beneath the Solid Waste Management Units, some of which may have been removed or treated or covered with clean backfill material for corrective action in accordance with TCEQ authorization.

EPA-080-93-0832

Exhibit B: Sketch and Area Metes & Bounds

RP 087-97-0823

RP 087-63-0834



STATE OF TEXAS
REGISTERED
WALTER P. SASS
4410
PROFESSIONAL
LAND SURVEYOR

PRIORITY GROUP 8

SKETCH OF A 0.003-ACRE (121 SQ. FT.), 0.813-ACRE (35,432 SQ. FT.) AND A 0.118-ACRE (5,146 SQ. FT.) TRACT SITUATED IN THE WM. VINCE SURVEY, A-78, HARRIS COUNTY, TEXAS

© Copyright 2013 Weisser Engineering Company, Inc.

BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE TEXAS SOUTH CENTRAL ZONE No. 4204 STATE PLANE GRID COORDINATES (NAD83)

NOTE:
THIS SURVEY IS BEING CREATED SOLELY FOR THE PARTIES HEREIN STATED; NO LICENSE HAS BEEN CREATED, EXPRESS OR IMPLIED, TO COPY THE SURVEY EXCEPT AS IS NECESSARY IN CONJUNCTION WITH THIS TRANSACTION.

WEISSER
Engineering Co.
19500 Park Row, Suite 100
Houston, Texas 77084
(281) 579 - 7300
T.B.P.E.R. #F-68

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT. ALL ENCUMBRANCES MAY NOT BE SHOWN.

REVISION DATE: 04/11/2013

DRAWN BY:	L.W.	CALC'D. BY:	J.H.	SCALE:	1" = 100'
F.B. NO:	2841	CHECKED BY:	M.B.	SHEET	01 OF 02
CREW CHIEF:	B.H.	DATE:	5/21/2013	JOB No.:	CT220 (1908-020)

P:\CT220\dwg\CT220_Tract_Bauxite_Pond.dwg, Layout 1, 05/23/13 9:57:55AM, jmichalik

TRAP No. 2
(SWMU 3)

DESCRIPTION OF A 0.003-ACRE (121 SQ. FT.)
TRACT OF LAND SITUATED IN
THE WM. VINCE SURVEY, A-78,
HARRIS COUNTY, TEXAS

Being a 0.003-acre (121 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas. Said 0.003-acre tract being a portion of a 167.333-acre tract of land conveyed to Pasadena Refining System, Inc. as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County, Texas, and being more particularly described by metes and bounds as follows with the bearings show hereon based on Texas South Central Zone No. 4204 state plane grid coordinates (NAD 83);

COMMENCING at a "PK" nail found for the intersection of the east right-of-way line of North Shaver Road (85 foot wide right-of-way), and the north right-of-way line of Second Street (40 foot wide right-of-way) and for the southwest corner of said 167.333-acre tract, (with a grid coordinate of N = 13,828,768.84, E = 3,170,729.60);

THENCE North 44° 48' 31" East, over and across said 167.333-acre tract, a distance of 1,830.52 feet to the southwest corner and the **POINT OF BEGINNING** of said tract herein described, (with a grid coordinate of N = 13,830,067.38, E = 3,172,019.50);

THENCE North 03° 12' 08" West, over and across said 167.333-acre tract and with the west line of said tract herein described, a distance of 11.99 feet to a point for the northwest corner of said tract herein described;

THENCE North 87° 25' 10" East, over and across said 167.333-acre tract and with the north line of said tract herein described, a distance of 10.06 feet to a point for the northeast corner of said tract herein described;

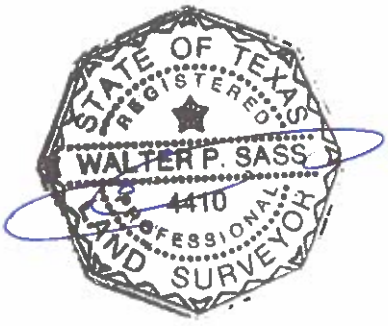
THENCE South 03° 02' 05" East, over and across said 167.333-acre tract and with the east line of said tract herein described, a distance of 12.01 feet to a point for the southeast corner of said tract herein described;

THENCE South 87° 31' 50" West, over and across said 167.333-acre tract and with the south line said tract herein described, a distance of 10.03 feet to the **POINT OF BEGINNING** and containing 0.003 acre (121 square feet) of land.

Compiled by:

Weisser Engineering Company
19500 Park Row, Suite 100
Houston, Texas 77084

Job No.: CT220 (1908-020)
Date: 5/21/13



RP 087-63-0835

FILED

2013 JUN 25 PM 1:22

Stan Stanart

COUNTY CLERK
HARRIS COUNTY, TEXAS

ANY PROVISION HEREIN WHICH RESTRICTS THE SALE, RENTAL, OR USE OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW.

THE STATE OF TEXAS
COUNTY OF HARRIS

I hereby certify that this Instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me; and was duly RECORDED, in the Official Public Records of Real Property of Harris County, Texas

JUN 25 2013

Stan Stanart
COUNTY CLERK
HARRIS COUNTY, TEXAS

RP-2013-0836

10

Notice

m

20130314019
06/25/2013 RP2 $52.00

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Harris County, Texas in compliance with the recordation requirements of said rules:

I

Pasadena Refining System, Inc. (PRSI) has performed a remediation of the land described herein (Gate 14 Waste Pile, SWMU 4). A list of the known constituents, including known concentrations, is attached hereto and is made part of this filing (Exhibit A). Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 30311 files, which are available for inspection upon request at the central office of the Texas Commission on Environmental Quality in Austin.

The Texas Commission on Environmental Quality derives its authority to review the remediation of this tract of land from 361.002 of the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361, which enables the Texas Commission on Environmental Quality to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to 5.012 and 5.013 of the Texas Water Code, Texas Water Code Ann. Chapter 5, the Texas Commission on Environmental Quality is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the Texas Commission on Environmental Quality requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the Texas Commission on Environmental Quality of the suitability of this land for any purpose, nor does it constitute any guarantee by the Texas Commission on Environmental Quality that the remediation standards specified in this certification have been met by PRSI.

II

Being a 1.347-acre (58,693 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas, said 1.347-acre tract being a portion of a 167.33-acre tract of land conveyed to Pasadena Refining System, Inc., as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County Texas and being more particularly described by metes and bounds as provided in Exhibit B. Exhibit B also provides a sketch of said 1.347-acre tract.

Return to: John Jones
PRSI
111 Red Bluff Rd
Pasadena, TX 77506

RP-087-63-0863

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION
(Continued)

Contaminants and waste deposited hereon have been remediated to meet industrial/commercial soil criteria, in accordance with a plan designed to meet the Texas Commission on Environmental Quality 's requirements in 30 Texas Administrative Code §335.555 (Risk Reduction Standard No. 3), which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential. The current or future owner must undertake actions as necessary to protect human health or the environment in accordance with the rules of the Texas Commission on Environmental Quality.

III

The owner of the site is Pasadena Refining System, Inc. and its address is 111 Red Bluff Road, Pasadena, Texas 77506, where more specific information may be obtained from the plant manager.

EXECUTED this the 24th day of June, 2013

102

Pasadena Refining System, Inc.

John Edmunds
Operations Director and COO

STATE OF TEXAS
HARRIS COUNTY

BEFORE ME, on this the 24 day of June, personally appeared Mr. John Edmunds, Operations Director and COO of Pasadena Refining System, Inc. , known to me to be the person and agent of said corporation whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 24 day of June, 2013.

Iriva Lyn Sturdivant
Notary Public in and for the State of Texas
County of Harris County

NOTARY PUBLIC STATE OF TEXAS
IRIVA LYN STURDIVANT
My Commission Expires
February 9, 2014

My Commission Expires
2.9.2014

HP 087-63-0864

Exhibit A: Table of Soil Concentrations

HP 0127-63-0865

Priority Group 6
(which includes Gate 14 Waste Pile and Tank 332 Firewall)
Known Constituents and Concentrations in Soils
Pasadena Refining Systems, Inc.

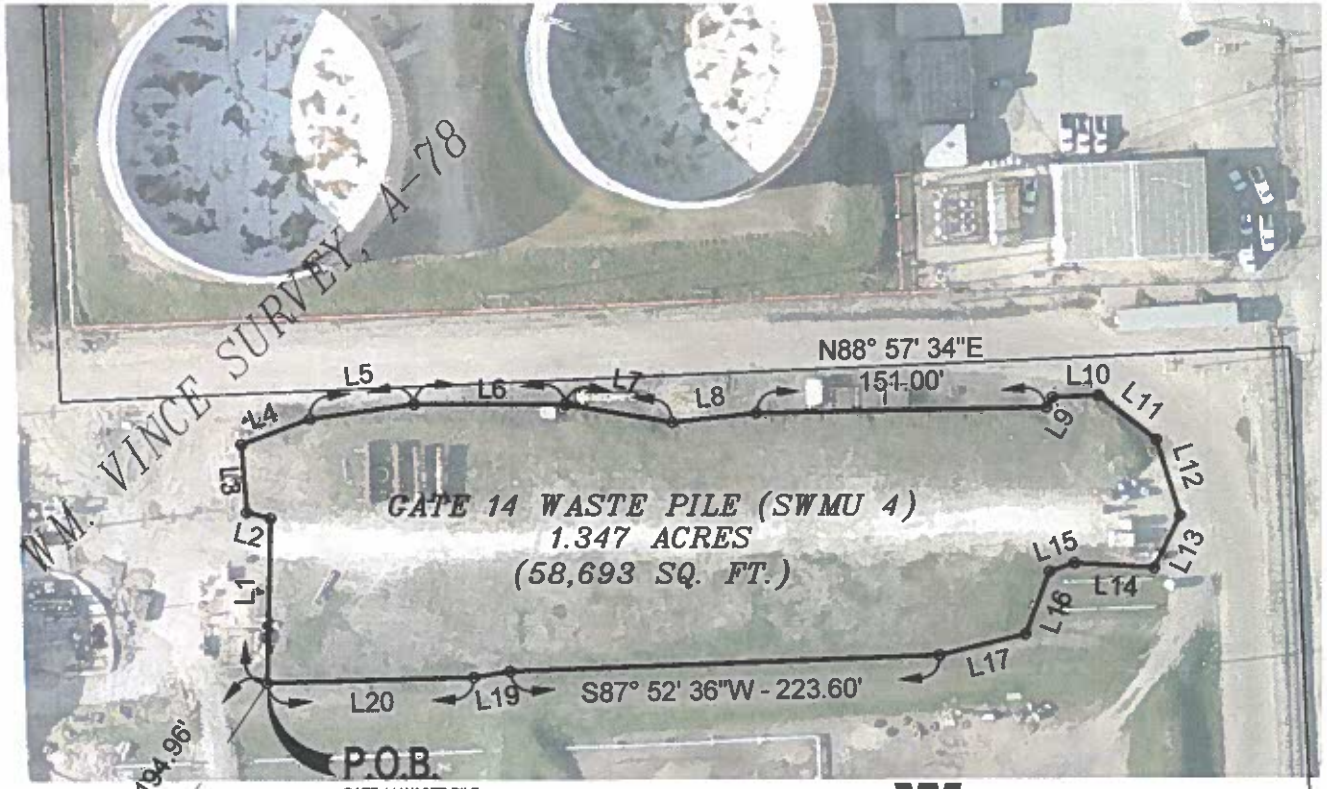
Constituent	Maximum Concentration (mg/Kg)
Total Phenols	800
Arsenic	11.8
Barium	796
Cadmium	0.7
Chromium	367
Cobalt	248
Lead	4000
Mercury	0.14
Nickel	68.1
Zinc	190
Benzene	2.7
Ethylbenzene	5.32
Toluene	61
m,p-Xylenes	91
o-Xylenes	35
Benzo(a)anthracene	36
Naphthalene	140

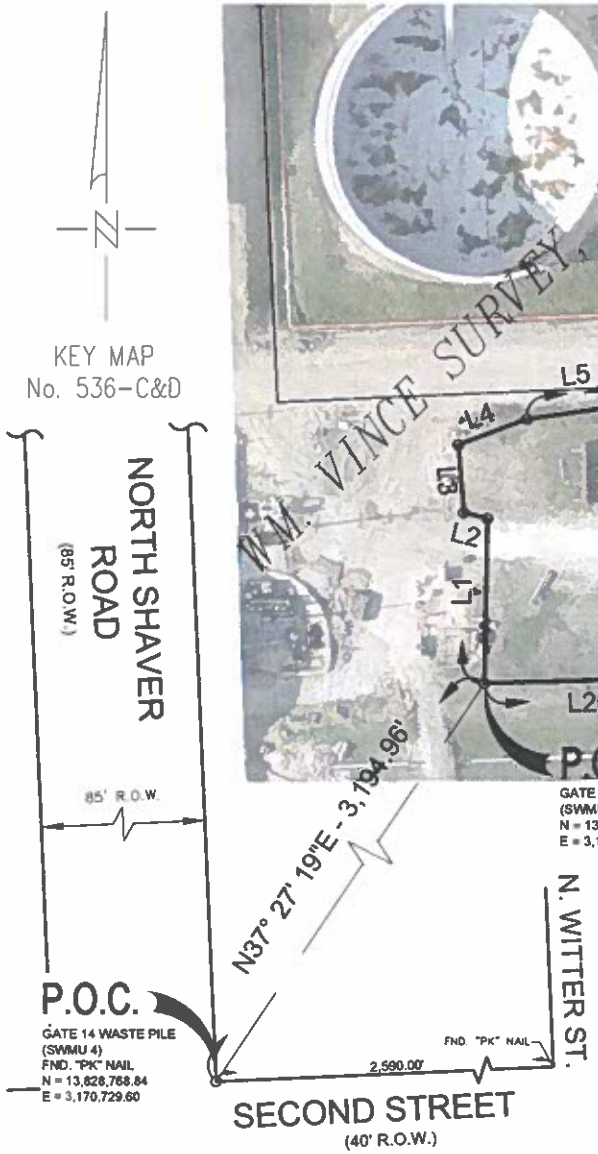
These values are based on sampling efforts conducted in the RCRA Facility Investigation (RFI) program for soils beneath the Solid Waste Management Units, some of which may have been removed or treated or covered with clean backfill material for corrective action in accordance with TCEQ authorization.

HP 037-63-0366

Exhibit B: Sketch and Area Metes & Bounds

RP 0837-63-0836.7





Line Table		
Line #	Length	Direction
L1	85.49'	N01° 09' 22"E
L2	12.80'	N75° 48' 42"W
L3	35.09'	N04° 39' 38"W
L4	38.18'	N69° 32' 56"E
L5	54.76'	N81° 49' 33"E
L6	78.49'	S89° 50' 17"E
L7	56.29'	S80° 26' 39"E
L8	44.29'	N83° 39' 14"E
L9	6.12'	N30° 39' 55"E
L10	24.12'	N87° 52' 41"E
L11	37.69'	S52° 35' 13"E
L12	40.90'	S17° 37' 29"E
L13	30.35'	S26° 12' 19"W
L14	41.62'	N86° 27' 51"W
L15	13.75'	S71° 16' 49"W
L16	34.67'	S20° 54' 32"W
L17	46.14'	S76° 00' 22"W
L18	18.91'	S80° 45' 32"W
L19	107.80'	S88° 20' 39"W

167.333 ACRES
PASADENA REFINING SYSTEM, INC.
H.C.C.F. NO. Y218006
F.C. NO. 599-22-0920
O.P.R.R.P.H.C.

WEISSER Engineering Co.
19500 Park Row, Suite 100
Houston, Texas 77084
(281) 579 - 7300
T.B.P.E.R. #F-68

STATE OF TEXAS
REGISTERED
WALTER P. SASS
4410
PROFESSIONAL
LAND SURVEYOR

PRIORITY GROUP 6

SKETCH OF A 1.347-ACRE (58,693 SQ. FT.) TRACT SITUATED IN THE WM. VINCE SURVEY, A-78, HARRIS COUNTY, TEXAS

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BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE TEXAS SOUTH CENTRAL ZONE No. 4204 STATE PLANE GRID COORDINATES (NAD83)

NOTE:
THIS SURVEY IS BEING CREATED SOLELY FOR THE PARTIES HEREIN STATED; NO LICENSE HAS BEEN CREATED, EXPRESS OR IMPLIED, TO COPY THE SURVEY EXCEPT AS IS NECESSARY IN CONJUNCTION WITH THIS TRANSACTION.

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT. ALL ENCUMBRANCES MAY NOT BE SHOWN.

REVISION DATE: 04/04/2013

DRAWN BY:	L.W.	CALC'D. BY:	J.H.	SCALE:	1" = 100'
F.B. NO:	2841	CHECKED BY:	M.B.	SHEET	01 OF 01
CREW CHIEF:	B.H.	DATE:	5/21/2013	JOB No:	CT220 (1908-020)

P:\CT220\dwg\Gate_14_Waste_Pile.dwg, Layout 1, 05/22/13 9:19:51AM, demus

RP 087-63-0868

GATE 14 WASTE PILE (SWMU 4)

**DESCRIPTION OF A 1.347-ACRE (58,693 SQ. FT.)
TRACT OF LAND SITUATED IN
THE WM. VINCE SURVEY, A-78,
HARRIS COUNTY, TEXAS**

Being a 1.347-acre (58,693 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas. Said 1.347-acre tract being a portion of a 167.333-acre tract of land conveyed to Pasadena Refining System, Inc. as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County, Texas, and being more particularly described by metes and bounds as follows with the bearings shown hereon based on the Texas South Central Zone No. 4204 state plane grid coordinates (NAD 83);

COMMENCING at a "PK" nail found for the intersection of the east right-of-way line of North Shaver Road (85 foot wide right-of-way), and the north right-of-way line of Second Street (4085 foot wide right-of-way) and for the southwest corner of said 167.333-acre tract, (with a grid coordinate of N = 13,828,768.84, E = 3,170,729.60);

THENCE North 37° 27' 19" East, over and across said 167.333-acre tract, a distance of 3,194.96 feet to the southwest corner and the **POINT OF BEGINNING** of said tract herein described, (with a grid coordinate of N = 13,831,304.80, E = 3,172,672.37);

THENCE North 01° 09' 22" East, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 85.49 feet to a point for an interior corner of said tract herein described;

THENCE North 75° 48' 42" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 12.80 feet to a point for the most southerly northwest corner of said tract herein described;

THENCE North 04° 39' 38" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 35.09 feet to a point for the most northerly northwest corner of said tract herein described;

THENCE North 69° 32' 56" East, over and across said 167.333-acre tract and with a northwest line of said tract herein described, a distance of 38.18 feet to a point for an angle point in said tract herein described;

THENCE North 81° 49' 33" East, over and across said 167.333-acre tract and with a northwest line of said tract herein described, a distance of 54.76 feet to a point for an angle point in said tract herein described;

THENCE South 89° 50' 17" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 78.49 feet to a point for an angle point in said tract herein described;

THENCE South 80° 26' 39" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 56.29 feet to a point for an angle point in said tract herein described;

RP 037-63-0869

THENCE North 83° 39' 14" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 44.29 feet to a point for an angle point in said tract herein described;

THENCE North 88° 57' 34" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 151.00 feet to a point for an angle point in said tract herein described;

THENCE North 30° 39' 55" East, over and across said 167.333-acre tract and with a northwest line of said tract herein described, a distance of 6.12 feet to a point for an angle point in said tract herein described;

THENCE North 87° 52' 41" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 24.12 feet to a point for an angle point in said tract herein described;

THENCE South 52° 35' 13" East, over and across said 167.333-acre tract and with a northeast line of said tract herein described, a distance of 37.69 feet to a point for an angle point in said tract herein described;

THENCE South 17° 37' 29" East, over and across said 167.333-acre tract and with a northeast line of said tract herein described, a distance of 40.90 feet to a point for an angle point in said tract herein described;

THENCE South 26° 12' 19" West, over and across said 167.333-acre tract and with a southeast line of said tract herein described, a distance of 30.35 feet to a point for the most easterly southwest corner of said tract herein described;

THENCE North 86° 27' 51" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 41.62 feet to a point for an angle point in said tract herein described;

THENCE South 71° 16' 49" West, over and across said 167.333-acre tract and with a southeast line of said tract herein described, a distance of 13.75 feet to a point for an interior angle point in said tract herein described;

THENCE South 20° 54' 32" West, over and across said 167.333-acre tract and with a southeast line of said tract herein described, a distance of 34.67 feet to a point for the most southerly southeast corner of in said tract herein described;

THENCE South 76° 00' 22" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 46.14 feet to a point for an angle point in said tract herein described;

THENCE South 87° 52' 36" West, over and across said 167.333-acre tract and with a southeast line of said tract herein described, a distance of 223.60 feet to a point for an angle point in said tract herein described;

THENCE South 80° 45' 32" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 18.91 feet to a point for an angle point in said tract herein described;

RP 087-63-0870

THENCE South 88° 20' 39" West, over and across said 167.333-acre tract and with a south line said tract herein described, a distance of 107.80 feet to the **POINT OF BEGINNING** and containing 1.347 acres (58,693 square feet) of land.

Compiled by:

Weisser Engineering Company
19500 Park Row, Suite 100
Houston, Texas 77084

Job No.: CT220 (1908-020)
Date: 5/21/13

RP 087-63-0871

FILED

2013 JUN 25 PM 1:22

Stan Stanart

COUNTY CLERK
HARRIS COUNTY, TEXAS

ANY PROVISION HEREIN WHICH RESTRICTS THE SALE RENTAL OR USE OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW

THE STATE OF TEXAS
COUNTY OF HARRIS

I hereby certify that this Instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me; and was duly RECORDED, in the Official Public Records of Real Property of Harris County, Texas

JUN 25 2013

Stan Stanart
COUNTY CLERK
HARRIS COUNTY, TEXAS

NF 087-63-0872

8.

NOTICE

M

20130314014
06/25/2013 RP2 $44.00

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Harris County, Texas in compliance with the recordation requirements of said rules:

I

Pasadena Refining System, Inc. (PRSI) has performed a remediation of the land described herein (Area Immediately Surrounding the Bauxite Pond, SWMU 5). A list of the known constituents, including known concentrations, is attached hereto and is made part of this filing (Exhibit A). Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 30311 files, which are available for inspection upon request at the central office of the Texas Commission on Environmental Quality in Austin.

The Texas Commission on Environmental Quality derives its authority to review the remediation of this tract of land from 361.002 of the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361, which enables the Texas Commission on Environmental Quality to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to 5.012 and 5.013 of the Texas Water Code, Texas Water Code Ann. Chapter 5, the Texas Commission on Environmental Quality is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the Texas Commission on Environmental Quality requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the Texas Commission on Environmental Quality of the suitability of this land for any purpose, nor does it constitute any guarantee by the Texas Commission on Environmental Quality that the remediation standards specified in this certification have been met by PRSI.

II

Being a 0.813-acre (35,432 square feet) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas, said 0.813-acre tract being a portion of a 167.33-acre tract of land conveyed to Pasadena Refining System, Inc., as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County Texas and being more particularly described by metes and bounds as provided in Exhibit B. Exhibit B also provides a sketch of said 0.813-acre tract.

Return to: John Jones
PRSI
111 Red Bluff Rd.
Pasadena, TX
77506

RP 087-63-0845

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION
(Continued)

Contaminants and waste deposited hereon have been remediated to meet industrial/commercial soil criteria, in accordance with a plan designed to meet the Texas Commission on Environmental Quality 's requirements in 30 Texas Administrative Code §335.555 (Risk Reduction Standard No. 3), which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential. The current or future owner must undertake actions as necessary to protect human health or the environment in accordance with the rules of the Texas Commission on Environmental Quality.

III

The owner of the site is Pasadena Refining System, Inc. and its address is 111 Red Bluff Road, Pasadena, Texas 77506, where more specific information may be obtained from the plant manager.

EXECUTED this the 24th day of June, 2013

Pasadena Refining System, Inc.

John Edmunds
Operations Director and COO

STATE OF TEXAS
HARRIS COUNTY

BEFORE ME, on this the 24 day of June, personally appeared Mr. John Edmunds, Operations Director and COO, of Pasadena Refining System, Inc., known to me to be the person and agent of said corporation whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 24 day of June, 2013.

Iriva Lyn Sturdivant
Notary Public in and for the State of Texas
County of Harris County

NOTARY PUBLIC STATE OF TEXAS
IRIVA LYN STURDIVANT
My Commission Expires
February 9, 2014

My Commission Expires
2.9.2014

HP 087-63-0846

Exhibit A: Table of Soil Concentrations

RP 1987-93-0847

Priority Group 8
(which includes Buried Cell Near Bauxite Pond, Area Immediately Surrounding Bauxite Pond, and Trap #2 Sump)
Known Constituents and Concentrations in Soils
Pasadena Refining Systems, Inc.

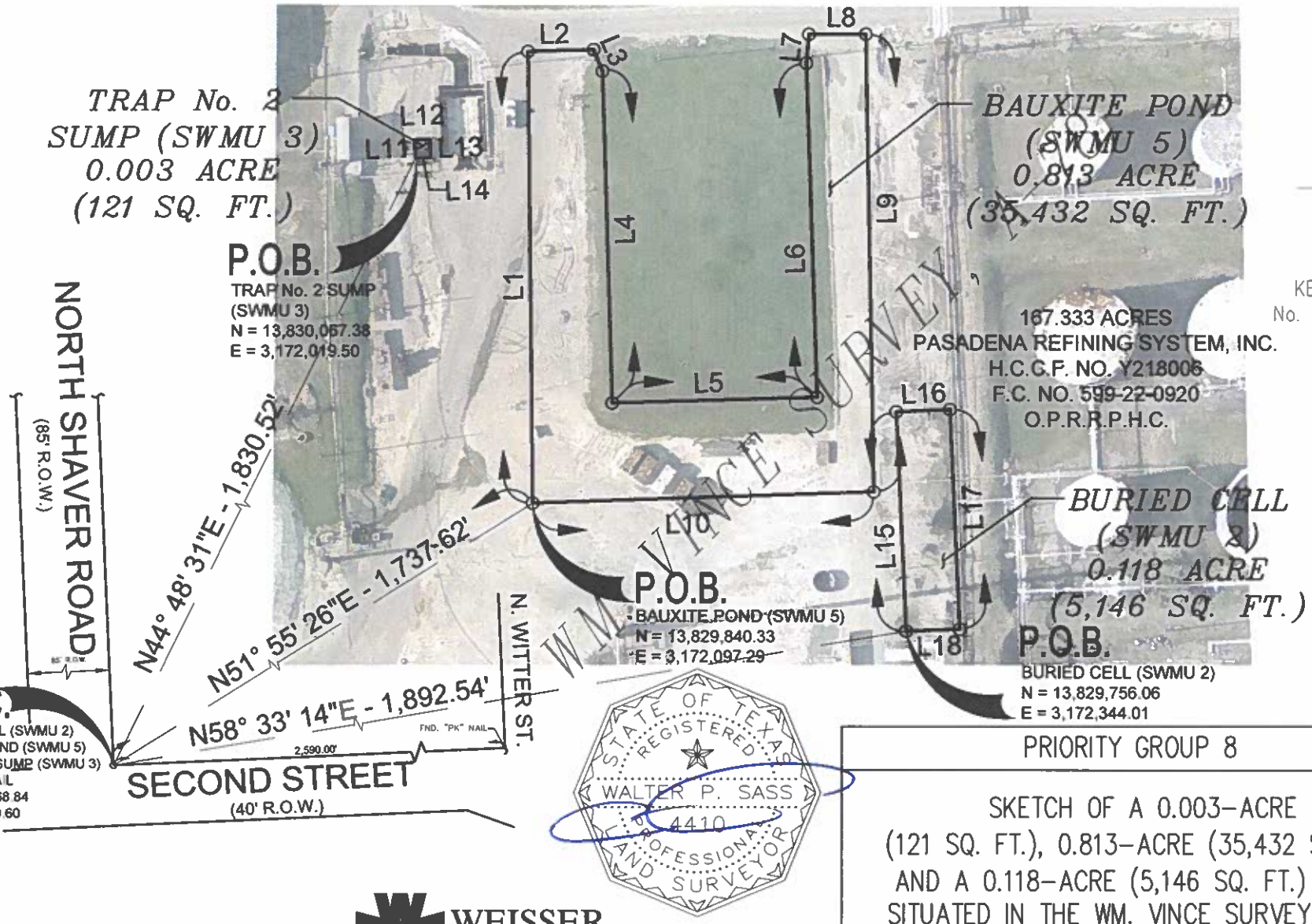
Constituent	Maximum Concentration (mg/Kg)
Total Phenols	16
Barium	760
Cadmium	1.2
Chromium	380
Lead	329
Nickel	40
Zinc	200
Benzene	0.93
Toluene	13
m,p-Xylenes	60
o-Xylenes	26
Benzo(a)anthracene	10
Naphthalene	55

These values are based on sampling efforts conducted in the RCRA Facility Investigation (RFI) program for soils beneath the Solid Waste Management Units, some of which may have been removed or treated or covered with clean backfill material for corrective action in accordance with TCEQ authorization.

RN 087-63-0848

Exhibit B: Sketch and Area Metes & Bounds

RP 037-63-0849



STATE OF TEXAS
REGISTERED
WALTER P. SASS
4410
PROFESSIONAL
LAND SURVEYOR

BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE TEXAS SOUTH CENTRAL ZONE No. 4204 STATE PLANE GRID COORDINATES (NAD83)

NOTE:
THIS SURVEY IS BEING CREATED SOLELY FOR THE PARTIES HEREIN STATED; NO LICENSE HAS BEEN CREATED, EXPRESS OR IMPLIED, TO COPY THE SURVEY EXCEPT AS IS NECESSARY IN CONJUNCTION WITH THIS TRANSACTION.

WEISSER
Engineering Co.
19500 Park Row, Suite 100
Houston, Texas 77084
(281) 579 - 7300
T.B.P.E.R. #F-68

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT. ALL ENCUMBRANCES MAY NOT BE SHOWN.
REVISION DATE: 04/11/2013

PRIORITY GROUP 8

SKETCH OF A 0.003-ACRE (121 SQ. FT.), 0.813-ACRE (35,432 SQ. FT.) AND A 0.118-ACRE (5,146 SQ. FT.) TRACT SITUATED IN THE WM. VINCE SURVEY, A-78, HARRIS COUNTY, TEXAS

© Copyright 2013 Weisser Engineering Company, Inc.

DRAWN BY:	L.W.	CALC'D. BY:	J.H.	SCALE:	1" = 100'
F.B. NO:	2841	CHECKED BY:	M.B.	SHEET	01 OF 02
CREW CHIEF:	B.H.	DATE:	5/21/2013	JOB No.:	CT220 (1908-020)

P:\CT220\dwg\CT220_Tract_Bauxite_Pond.dwg, Layout 1, 05/23/13 9:57:55AM, jmicholik

BAUXITE POND
(SWMU 5)

DESCRIPTION OF A 0.813-ACRE (35,432 SQ. FT.)
TRACT OF LAND SITUATED IN
THE WM. VINCE SURVEY, A-78,
HARRIS COUNTY, TEXAS

Being a 0.813-acre (35,432 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas. Said 0.813-acre tract being a portion of a 167.333-acre tract of land conveyed to Pasadena Refining System, Inc. as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County, Texas, and being more particularly described by metes and bounds as follows with the bearings show hereon based on Texas South Central Zone No. 4204 state plane grid coordinates (NAD 83);

COMMENCING at a "PK" nail found for the intersection of the east right-of-way line of North Shaver Road (85 foot wide right-of-way), and the north right-of-way line of Second Street (40 foot wide right-of-way) and for the southwest corner of said 167.333-acre tract, (with a grid coordinate of N = 13,828,768.84, E = 3,170,729.60);

THENCE North 51° 55' 26" East, over and across said 167.333-acre tract, a distance of 1,737.62 feet to the southwest corner and the **POINT OF BEGINNING** of said tract herein described, (with a grid coordinate of N = 13,829,840.33, E = 3,172,097.29);

THENCE North 00° 36' 32" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 297.48 feet to a point for a northwest corner of said tract herein described;

THENCE North 88° 16' 10" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 43.45 feet to a point for a northeast corner of said tract herein described;

THENCE South 22° 54' 02" East, over and across said 167.333-acre tract and with a northeast line of said tract herein described, a distance of 15.30 feet to an angle of said tract herein described;

THENCE South 01° 41' 32" East, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 218.64 feet to a point for an interior angle point of said tract herein described;

THENCE North 88° 22' 44" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 135.14 feet to a point for an interior angle point of said tract herein described;

THENCE North 01° 51' 27" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 220.05 feet to a point for an angle point of said tract herein described;

THENCE North 04° 51' 59" East, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 19.25 feet to a point for the most northwest corner of said tract herein described;

HP 087-63-0851

THENCE North 89° 45' 48" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 37.75 feet to a point for a northeast corner of said tract herein described;

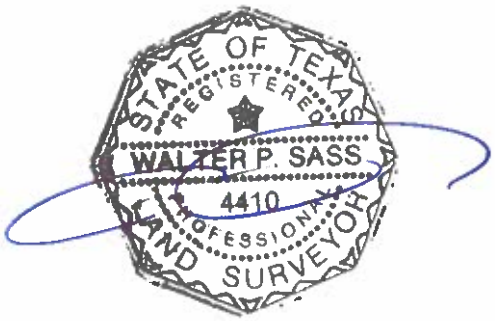
THENCE South 01° 01' 11" East, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 301.89 feet to a point for the southeast corner of said tract herein described;

THENCE South 88° 07' 14" West, over and across said 167.333-acre tract and with the south line said tract herein described, a distance of 225.50 feet to the **POINT OF BEGINNING** and containing 0.813 acre (35,432 square feet) of land.

Compiled by:

Weisser Engineering Company
19500 Park Row, Suite 100
Houston, Texas 77084

Job No.: CT220 (1908-020)
Date: 5/21/13



RP 087-63-0852

RECORDER'S MEMORANDUM:
At the time of recordation, this instrument was found to be inadequate for the best photographic reproduction because of illegibility, carbon or photo copy, discolored paper, etc. All blockouts, additions and changes were present at the time the instrument was filed and recorded.

FILED

2013 JUN 25 PM 12:22

Stan Stanart
COUNTY CLERK
HARRIS COUNTY, TEXAS

ANY PROVISION HEREIN WHICH RESTRICTS THE SALE, RENTAL OR USE OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW.
THE STATE OF TEXAS
COUNTY OF HARRIS
I hereby certify that this Instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me; and was duly RECORDED, in the Official Public Records of Real Property of Harris County, Texas

JUN 25 2013

Stan Stanart
COUNTY CLERK
HARRIS COUNTY, TEXAS

HP 087-63-0853

20130314028
06/25/2013 RP2 $40.00

NOTICE

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Harris County, Texas in compliance with the recordation requirements of said rules:

I

Pasadena Refining System, Inc. (PRSI) has performed a remediation of the land described herein (Sandblast Grit Pile, No SWMU Number). A list of the known constituents, including known concentrations, is attached hereto and is made part of this filing (Exhibit A). Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 30311 files, which are available for inspection upon request at the central office of the Texas Commission on Environmental Quality in Austin.

The Texas Commission on Environmental Quality derives its authority to review the remediation of this tract of land from 361.002 of the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361, which enables the Texas Commission on Environmental Quality to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to 5.012 and 5.013 of the Texas Water Code, Texas Water Code Ann. Chapter 5, the Texas Commission on Environmental Quality is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the Texas Commission on Environmental Quality requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the Texas Commission on Environmental Quality of the suitability of this land for any purpose, nor does it constitute any guarantee by the Texas Commission on Environmental Quality that the remediation standards specified in this certification have been met by PRSI.

II

Being a 0.038-acre tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas, said 0.038-acre tract being a portion of a 167.33-acre tract of land conveyed to Pasadena Refining System, Inc., as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County Texas and being more particularly described by metes and bounds as provided in Exhibit B. Exhibit B also provides a sketch of said 0.038-acre tract.

XP 087-63-0912

Return to: John Jones
PRSI
111 Red Bluff Rd
Pasadena TX 77506

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION
(Continued)

Contaminants and waste deposited hereon have been remediated to meet industrial/commercial soil criteria, in accordance with a plan designed to meet the Texas Commission on Environmental Quality 's requirements in 30 Texas Administrative Code §335.555 (Risk Reduction Standard No. 3), which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential. The current or future owner must undertake actions as necessary to protect human health or the environment in accordance with the rules of the Texas Commission on Environmental Quality.

III

The owner of the site is Pasadena Refining System, Inc. and its address is 111 Red Bluff Road, Pasadena, Texas 77506, where more specific information may be obtained from the plant manager.

EXECUTED this the 24th day of June, 2013

Pasadena Refining System, Inc.

Operations Director and COO

W2

STATE OF TEXAS
HARRIS COUNTY

BEFORE ME, on this the 24 day of June, personally appeared Mr. John Edmunds, Operations Director and COO, of Pasadena Refining System, Inc. , known to me to be the person and agent of said corporation whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 24 day of June, 2013.

Iriva Lyn Sturdivant
Notary Public in and for the State of Texas
County of Harris County

NOTARY PUBLIC STATE OF TEXAS
IRIVA LYN STURDIVANT
My Commission Expires
February 9, 2014

My Commission Expires
2·9·2014

RP 087-63-0913

Exhibit A: Table of Soil Concentrations

RP 087-63-0914

Priority Group 2
(which includes Sandblast Grit Pile and Tank 85 Firewall)
Known Constituents and Concentrations in Soils
Pasadena Refining Systems, Inc.

Constituent	Maximum Concentration (mg/Kg)
Total Phenols	24.4
Arsenic	4.03
Barium	197
Chromium	110
Lead	992
Nickel	13.8
Zinc	13.8
Benzene	0.152
Ethylbenzene	0.0102
Toluene	0.21
Total Xylenes	1.38
Benzo(a)anthracene	0.01
Naphthalene	0.0067

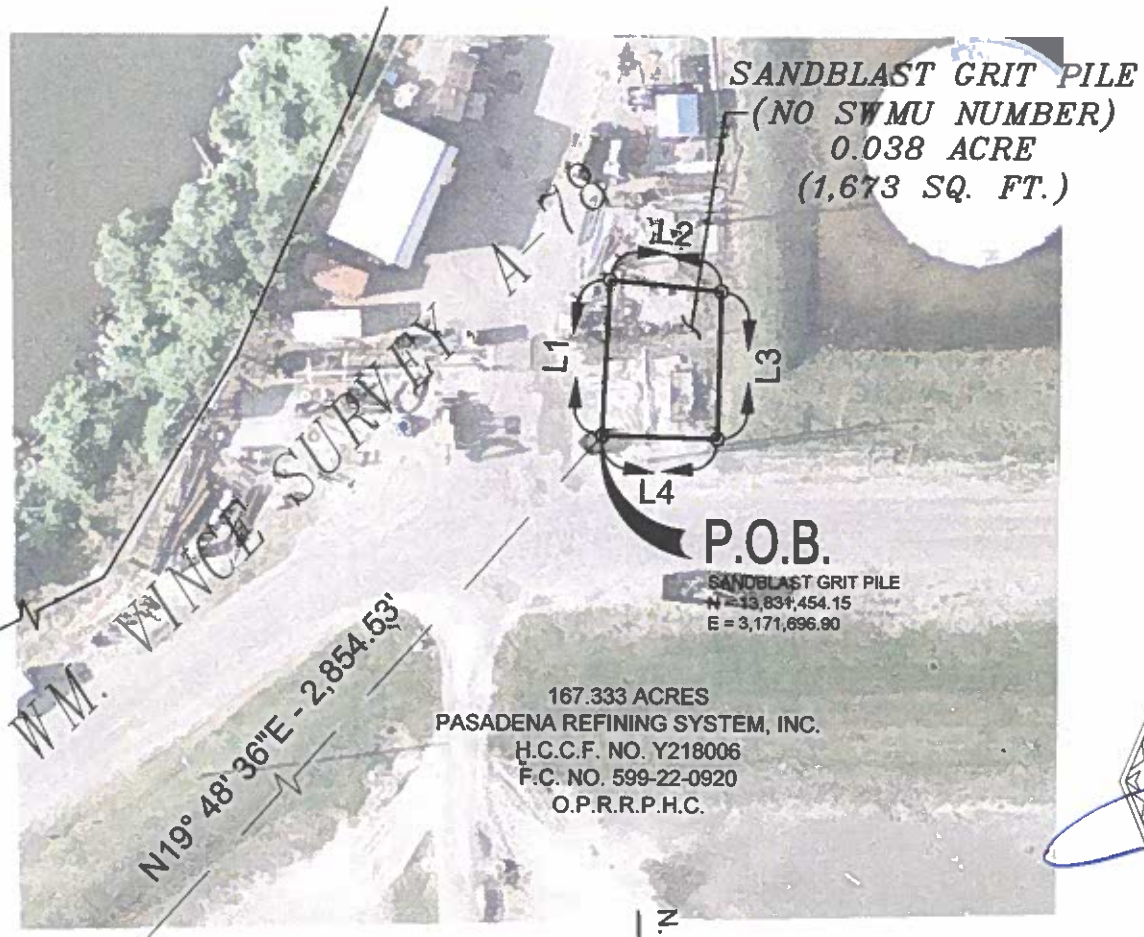
These values are based on sampling efforts conducted in the RCRA Facility Investigation (RFI) program for soils beneath the Solid Waste Management Units, some of which may have been removed or treated or covered with clean backfill material for corrective action in accordance with TCEQ authorization.

HP 087-63-0915

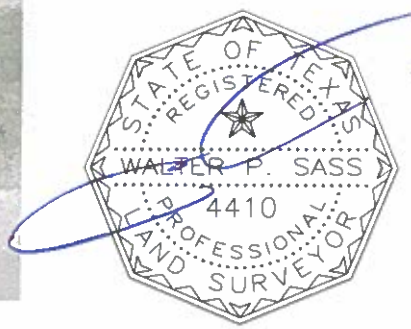
Exhibit B: Sketch and Area Metes & Bounds

RP 087-63-0916

P:\CT220\dwg\Sandblast_Grit_Pile.dwg, Layout 1, 05/22/13 10:35.29AM, jlemus



Line Table		
Line #	Length	Direction
L1	48.52'	N02° 45' 17"E
L2	34.96'	S84° 10' 14"E
L3	45.82'	S01° 20' 53"W
L4	36.05'	N88° 34' 21"W



BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE TEXAS SOUTH CENTRAL ZONE No. 4204 STATE PLANE GRID COORDINATES (NAD83)

NOTE:
THIS SURVEY IS BEING CREATED SOLELY FOR THE PARTIES HEREIN STATED; NO LICENSE HAS BEEN CREATED, EXPRESS OR IMPLIED, TO COPY THE SURVEY EXCEPT AS IS NECESSARY IN CONJUNCTION WITH THIS TRANSACTION.

WEISSER Engineering Co.
19500 Park Row, Suite 100
Houston, Texas 77084
(281) 579 - 7300
T.B.P.E.R. #F-68

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT. ALL ENCUMBRANCES MAY NOT BE SHOWN.
REVISION DATE: 04/02/2013

PRIORITY GROUP 2

SKETCH OF A 0.038-ACRE (1,673 SQ. FT.) TRACT SITUATED IN THE WM. VINCE SURVEY, A-78, HARRIS COUNTY, TEXAS

© Copyright 2013 Weisser Engineering Company, Inc.

DRAWN BY:	L.W.	CALC'D. BY:	J.H.	SCALE:	1" = 50'
F.B. NO:	2841	CHECKED BY:	M.B.	SHEET	01 OF 01
CREW CHIEF:	B.H.	DATE:	5/21/2013	JOB No.:	CT220 (1908-020)

2T60-E9-JAA JW

SANDBLAST GRIT PILE

RECORDER'S MEMORANDUM:
At the time of recordation, this instrument was found to be inadequate for the best photographic reproduction because of illegibility, carbon or photo copy, discolored paper, etc. All blockouts, additions and changes were present at the time the instrument was filed and recorded.

**DESCRIPTION OF A 0.038-ACRE (1,673 SQ. FT.)
TRACT OF LAND SITUATED IN
THE WM. VINCE SURVEY, A-78,
HARRIS COUNTY, TEXAS**

Being a 0.038-acre (1,673 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas. Said 0.038-acre tract being a portion of a 167.333-acre tract of land conveyed to Pasadena Refining System, Inc. as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County, Texas, and being more particularly described by metes and bounds as follows with the bearings shown hereon based on Texas South Central Zone No. 4204 state plane grid coordinates (NAD 83);

COMMENCING at a "PK" nail found for the intersection of the east right-of-way line of North Shaver Road (85 foot wide right-of-way), and the north right-of-way line of Second Street (40 foot wide right-of-way) and for the southwest corner of said 167.333-acre tract, (with a grid coordinate of N = 13,828,768.84, E = 3,170,729.60);

THENCE North 19° 48' 36" East, over and across said 167.333-acre tract, a distance of 2,854.53 feet to the southwest corner and the **POINT OF BEGINNING** of said tract herein described, (with a grid coordinate of N = 13,831,454.15, E = 3,171,696.90);

THENCE North 02° 45' 17" East, over and across said 167.333-acre tract and with the west line of said tract herein described, a distance of 48.52 feet to a point for the northwest corner of said tract herein described;

THENCE South 84° 10' 14" East, over and across said 167.333-acre tract and with the north line of said tract herein described, a distance of 34.96 feet to a point for the northeast corner of said tract herein described;

THENCE South 01° 20' 53" West, over and across said 167.333-acre tract and with the east line of said tract herein described, a distance of 45.82 feet to a point for the southeast corner of said tract herein described;

THENCE North 88° 34' 21" West, over and across said 167.333-acre tract and with the south line said tract herein described, a distance of 36.05 feet to the **POINT OF BEGINNING** and containing 0.038 acre (1,673 square feet) of land.

Compiled by:

Weisser Engineering Company
19500 Park Row, Suite 100
Houston, Texas 77084

Job No.: CT220 (1908-020)
Date: 5/21/13

RP 087-63-0918

FILED

2013 JUN 25 PM 1:20

Stan Stewart

COUNTY CLERK
HARRIS COUNTY, TEXAS

ANY PROVISION HEREIN WHICH RESTRICTS THE SALE, RENTAL OR USE OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW.
THE STATE OF TEXAS
COUNTY OF HARRIS
I hereby certify that this instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me; and was duly RECORDED, in the Official Public Records of Real Property of Harris County, Texas

JUN 25 2013

Stan Stewart
COUNTY CLERK
HARRIS COUNTY, TEXAS

RP 087-63-0919

Attachment C
Revised Tables

Redline Tables

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
Stormwater Pond (Facility Unit 01)	002	Inactive (Interim Closed)	18.4 million gallons	~~18~~19	1973*
Moat (Facility Unit 02)	001	Closed	17 million gallons	10	1979
Bauxite Pond (Facility Unit 03)	007	Closed	1.8 million gallons	~~41~~45	1947
Barrel Storage Yard	004	Closed	10,340 gallons	13	1981**

Notes:

* The Stormwater Pond was re-constructed in 1973 to meet indicated capacity. Prior to that time, the area occupied by the unit was used for process and stormwater drainage, dated back to the early years of the refinery (ca. 1919).

** The Barrel Storage Yard was clean-closed under Risk Reduction Standard No. 2 with no further action required.

[1] Indicate only one of the following: Active, Inactive, Closed, or Proposed

[2] Cubic yards, gallons, pounds, gallons/minute, pounds/hour, BTUs/hour, etc.

Table IV.B. - Wastes Managed In Permitted Units

No.	Waste	EPA Hazardous Waste Numbers	TCEQ Waste Form Codes and Classification Codes
1*	Heat Exchanger Bundle Cleaning Sludge	K050	603H
2*	Acid Washwater	D002, D018	102H
3*	Leaded Tank Bottoms	D008, K052	603H
4*	CPI Separator Sludge	F037	503H
5*	Cooling Tower Sludge	Not applicable	5191
6*	Sludge ~~Container~~ Containing Organics	D018, D026	503H
7*	Slop Oil Emulsion Solids	K049	205H
8*	Drainage and Rinsate from Container Storage Area	D018	102H
9*	Oily Sludges, Heavy	Not applicable	4301
10*	Cooling Tower Sludge	D007	290H
11*	Tank Bottoms, Crude Oil	K169	603H
12*	Oily Sludge Without Phenols	Not applicable	8402
13*	Middle Distillate Tank Bottoms	Not applicable	2901
14*	Storm Surge Pond Sludge	D018, F037	503H
15*	Desalter Oily Water	D002, D003, D018, D028	102H
16*	Tank Water Draws	D002, D003, D018, D028	102H
17	Stormwater	Not applicable	1192

*Wastes managed historically in units that are closed or interim closed and are no longer used to manage hazardous waste.

Revision Date Oct 3, 2024

Table V.D.1. - Surface Impoundments

Permit Unit No.	Surface Impoundment	N.O.R No.	Waste Nos.[1,3]	Rated Capacity	Dimensions	Distance from lowest liner to groundwater	Action Leakage Rate (if required)	Unit will manage Ignitable, Reactive, Incompatible, or F020, F021, F022, F023, F026, and F027 Waste (state all that apply)	Unit Status
1	Stormwater Pond	002	1, 2, 3, 4, 5, 6, 7, 8, 15, 16, 17[3]	18.4 Million Gallons	~700' x 400'	~1'	N/A	No	Active/Interim Closed
2	Moat	001	4, 6, 7, 9, 10, 11, 12, 13, 14, 15	17 Million Gallons	350' x 400'	~6'	N/A	No	Closed as Landfill
3	Bauxite Pond	007	1, 2, 9	1.8 Million Gallons	150'x240'	~1'	N/A	No	Closed as Landfill

1. From Table IV.B, first column
2. Dimensions should be provided as average length, width and depth, also include the surface acreage for the unit.
3. All wastes except Waste Number 17 were historically managed in closed or interim closed units that no longer manage hazardous waste.

Table XI.A.1. - Facility History for Waste Management Units

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
~~**Refinery and Red Bluff Tank Farm – NOR 30311**~~										
Refinery: Moat*	Surface Impoundment	001	1/1/1979	D002, D003, D007, D018, D026, D028 F037, K049, K050, K169	3.2 acres	Unknown	12/31/1989	1/1/1991	4/9/1991	Yes
Refinery: Stormwater Pond*	Surface Impoundment	002	1/1/1973	D002, D003, D008, D018, D026, D028, F037, K049, K050, K052	4.9 acres	~~0~~ Unknown	~~12/31/1991~~ prior to May 1990	6/30/1992		Yes
Refinery: Barrel Storage Yard*	Container Storage Area	004	1/1/1981	D001, D008, U077	188 drums	0	1/1/1994	10/6/1994	10/6/1994	No
Refinery: Bauxite Pond*	Surface Impoundment	007	1/1/1920	D002, D018, K050	0.7 acres	~~0~~ Unknown	12/31/1988	1/1/1990	~~10/11/1990~~ 3/20/1992	Yes

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Waste Pile Containing Coke at Gate 14	Land Application (SWMU 4)	005	1/1/1978	-	1800 cy	N/A	N/A			No
Refinery: Road Fill	Landspreading Area	008	N/A	-	108,440 cy	N/A	N/A			No
Refinery: Tank	Tank (Aboveground)	009	Unknown	-	18,700 gallons	0	Prior to 1990	1995		No
Refinery: Storage Bin*	Misc. Storage Container	010	1989	D001, D007, D008, D018, D023, D024, D025, F037, K049, K050, K052, K169, K171	450 cy	N/A	N/A			No
Refinery: Storage Bin	Misc. Storage Container	011	1989	-	15 cy	0	1995			No
Refinery: Storage Bin*	Misc. Storage Container	012	1989	F037	15 cy	0	1995			No
Refinery: Tank 97*	Tank (Aboveground; SWMU 13)	013	Unknown	D001, D003, D018, D028 F037	3,864,000 gallons	N/A	N/A			~~No~~Yes

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: CPI Separator	Waste Treatment Unit	014	Unknown	D001, D003, D018, D028, F037	N/A	N/A	N/A			No
Refinery: Trap No. 2 Sump~~#2 Trap Separator~~	Waste Treatment Unit (SWMU 3)	015	1943	-	N/A	N/A	N/A			No
Refinery: #3 Trap Separator	Waste Treatment Unit	016	Unknown	-	N/A	N/A	N/A			No
Refinery: Storage Bin	Misc. Storage Container	017	1989	-	15 cy	0	1995			No
Refinery: Storage Bin*	Misc. Storage Container	018	1989	D001, D003, D008, D018, K052, K169, K171	15 cy	0	1995			No
Refinery: Storage Bin*	Misc. Storage Container	019	1992	K050	15 cy	N/A	N/A			No
Refinery: Tank 400*	Tank (Aboveground)	020	1992	D002, D003, D018, D028	3,763,200 gal	N/A	N/A			No
Refinery: Container Storage Area*	Container Storage Area	021	1992	D002, D003, D018, D028	88 drums	N/A	N/A			No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Waste Pile	Land Application	022	1995	-	6 cy	0	1995	1995		No
Refinery: Vehicle Maintenance Battery Storage Area*	Container Storage Area	023	Prior to 1993	D002, D008	6 batteries	0	No longer regulated			No
Refinery: Weathered Tank Bottom Storage Area	Surface Impoundment	024	Prior to 1993	-	11,700 cf	Unknown	Unknown	2001		No
Refinery: Temporary Frac Tank*	Misc. Storage Container	025	Prior to 1993	F037	50 drums	N/A	N/A			No
Refinery: Platinum Catalyst Container Storage Area*	Container Storage Area	026	1995	D018	64 drums	N/A	N/A			No
Refinery: Temporary CBM Tank, Portable*	Container Storage Area	027	1995	D002	6,300 gal	0	1996	1996	N/A	No
Refinery: Temporary CBM Tank, Portable*	Container Storage Area	028	1995	D002	6,300 gal	0	1996	1996	N/A	No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Temporary ARN Tank, Portable	Container Storage Area	029	1995	-	6,300 gal	0	1996	1996	N/A	No
Refinery: Temporary ARN Tank, Portable	Container Storage Area	030	1995	-	6,300 gal	0	1996	1996	N/A	No
Refinery: Tank 51*	Tank (Abovegro und)	031	1995	D002, D003, D018, D028	3,383,940 gal	N/A	N/A			No
Refinery: Tank 65*	Tank (Abovegro und)	032	1998	D002, D003, D018, D028	80,000 bbls	N/A	N/A			No
Refinery: Tank Fire Walls (consisting of 33 tanks: 1, 2, 47 (removed), 50, 51, 85, 97, 202, 203, 204, 206, 314 to 317, 319 to 327, 330 (formerly 207), 331, 332, 348, 811, 820, and 824 to 826)	SWMU 1	-	Unknown	-	Unknown	Unknown	Unknown	~~2012~~		~~No~~Yes

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Buried Cell Near the Bauxite Pond	SWMU 2	-	Unknown	-	Unknown	Unknown	Unknown	2012		No
Refinery: Area Immediately Surrounding the Bauxite Pond	SWMU 5	-	Unknown	-	Unknown	Unknown	Unknown	2012		No
Refinery: Dehydrator Tank Fire Walls	SWMU 6	-	1953	-	15,571 cy	Unknown	1973	2012		No
Refinery: Maintenance Area Ditch	SWMU 7	-	Unknown	-	300 cf	0	Unknown	~~2012~~		No
Refinery: Detol Pad	SWMU 8	-	1987	-	47 cy	0	1993	~~2012~~		No
Refinery: Sandblast Grit Pile	SWMU 9	-	N/A	-	-	0	N/A	1994		No
Refinery: Tanks 203 and 204*	SWMU 12	-	1940	K170	-	N/A	2019			~~No~~Yes
RBTF: Tank 830	SWMU 14	-	N/A	N/A	N/A	N/A	N/A			No
Refinery: Tank 307	SWMU 15	-	N/A	N/A	N/A	N/A	N/A			~~No~~Yes

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Storm Water System	SWMU 23	-	N/A	N/A	N/A	N/A	N/A			No
~~West Property Pulp Mill – NOR 30582~~										
~~Landfill~~	~~Landfill~~	~~001~~	~~Unknown~~	~~-~~	~~-~~	~~-~~	~~-~~	~~Pre-2015~~	~~Pre-2015~~	~~No~~
WP: Dumpster (Cafeteria, Labs, Offices)	Misc. Container	301	1999	N/A	8 cy	0	Unknown	2010		No
WP: Dumpster (Machine Shops)	Misc. Container	302	1999	N/A	8 cy	0	Unknown	2010		No
WP: Dumpster (Evaporators)	Misc. Container	303	1999	N/A	6 cy	0	Unknown	2010		No
WP: Dumpster (Water Treatment Plant)	Misc. Container	304	1999	N/A	6 cy	0	Unknown	2010		No
WP: Dumpster (Carpenter Shop)	Misc. Container	305	1999	N/A	4 cy	0	Unknown	2010		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Dumpster (Storeroom)	Misc. Container	306	1999	N/A	8 cy	0	Unknown	2010		No
WP: Dumpster (Storeroom)	Misc. Container	307	1999	N/A	8 cy	0	Unknown	2010		No
WP: Dumpster (24 Machine Maint. Shops)	Misc. Container	308	1999	N/A	8 cy	0	Unknown	2010		No
WP: Dumpster (24 Machine)	Misc. Container	309	1999	N/A	6 cy	0	Unknown	2010		No
WP: Dumpster (Contractor Hill Dumpster)	Misc. Container	310	1999	N/A	8 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (24 Machine)	Misc. Container	311	1999	N/A	30 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (24 Machine)	Misc. Container	312	1999	N/A	30 cy	0	Unknown	2010		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Roll-off Dumpster (24 Machine)	Misc. Container	313	1999	N/A	30 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (24 Machine)	Misc. Container	314	1999	N/A	40 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (Mobile Shop)	Misc. Container	315	1999	N/A	30 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (Mobile Shop)	Misc. Container	316	1999	N/A	30 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (Truck Staging Area)	Misc. Container	317	1999	N/A	30 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (Storeroom Dumpster)	Misc. Container	318	1999	N/A	30 cy	0	Unknown	2010		No
WP: Salvage Yard Piles	Waste Pile (SWMU 16)	319	1999	N/A	-	0				Yes
WP: Waste Piles near Paint Shop	Waste Pile (SWMU 20)	320	1999	N/A	-	0	Unknown			Yes

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Container Storage Area	Container Storage Area	321	1999	N/A	-	0	Unknown	2010		No
WP: Container Storage Area*	Container Storage Area	322	1999	D001, D002, D018, D039, D040, F003, F005	-	0	Unknown	2010		No
WP: Enclosed Dumpsters for Asbestos Waste	Misc. Container	323	1999	N/A	40 cy	0	Unknown	2010		No
WP: Storage Area for Asbestos Containing Materials	Container Storage Area (SWMU 18)	324	1999	N/A	-	0	Unknown			No
WP: Safety-Kleen Parts Washer (Pump Shop)	Tank	325	1999	D001, D018, D039, D040	30 gal	0	Unknown	2010		No
WP: Safety-Kleen Parts Washer (Mobile Shop)	Tank	326	1999	D001, D018, D039, D040	30 gal	0	Unknown	2010		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Safety-Kleen Parts Washer (Mobile Shop)	Tank	327	1999	D001, D018, D039, D040	30 gal	0	Unknown	2010		No
WP: Landfill	Landfill	401	Unknown	-	-	-	-	Pre-2015	Pre-2015	No
WP: Storage Area for Asbestos Containing Material	Container Storage Area (SWMU 18)	~~002~~402	N/A	N/A	N/A	N/A	N/A	2015		No
WP: Container Storage Area (General Storeroom)*	Container Storage Area	~~003~~403	Unknown	D001, D002, D003, F003, F005	Unknown	0	Unknown	2010		No
WP: Misc. Storage Container	Misc. Storage Container	~~004~~404	Unknown	N/A	40 cy	0	Unknown	2008		No
WP: Misc. Storage Container*	Misc. Storage Container	~~005~~405	Unknown	D001, D018, D039, D040	40 cy	0	Unknown	2010		No
WP: Trash Dumpsters	Misc. Storage Container	~~006~~406	Unknown	N/A	Unknown	0	Unknown	2010		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Dumpster – Recaust Tank Bottoms	Misc. Storage Container	~~008~~408	Unknown	N/A	Unknown	0	Unknown	2008		No
WP: Dumpster – Recaust Tank Bottoms*	Misc. Storage Container	~~009~~409	Unknown	D002, D003	Unknown	0	Unknown	2010		No
WP: Misc. Storage Container*	Misc. Storage Container	~~010~~410	Unknown	D001, D018, D039, D040	30 gal	0	Unknown	2010		No
WP: Misc. Storage Container*	Misc. Storage Container	~~011~~411	Unknown	D001, D018, D039, D040	30 gal	0	Unknown	2010		Yes
WP: Misc. Storage Container	Misc. Storage Container	~~012~~412	Unknown	D001, D018, D039, D040	30 gal	0	Unknown	2010		No
WP: Mill Wide Process Waste Water Collection System*	Neutralization only	~~013~~413	Unknown	D002, D003	-	N/A	N/A	N/A		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: ~~Container Storage Area~~Paint Storage Room*	Container Storage Area (SWMU 22)	~~014~~414	Unknown	D001, F003, F005	-	0	Unknown	2010		Yes
WP: Container Storage Area	Container Storage Area	~~015~~415	Unknown	N/A	-	0	Unknown	2010		No
WP: Misc. Storage Container	Misc. Storage Container	~~016~~416	Unknown	N/A	40 cy	0	Unknown	2008		No
WP: Incinerator	Incinerator (SWMU 19)	~~017~~417	Unknown	N/A	-	0	Unknown			Yes
WP: Wood Waste Pile and Dumpsters	Container Storage Area	~~018~~418	Unknown	N/A	-	0	2006	2008		No
WP: Dumpsters (Paper Machine)	Misc. Storage Container	~~019~~419	Unknown	N/A	-	0	Unknown	2008		No
WP: Dumpsters (Mobile Shop)	Misc. Storage Container	~~020~~420	Unknown	N/A	-	0	Unknown	2008		No
WP: Dumpsters (Salvage Yard)	Misc. Storage Container	~~021~~421	Unknown	N/A	-	0	Unknown	2008		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Dumpsters (Cafeteria & General Office)	Misc. Storage Container	~~022~~422	Unknown	N/A	-	0	Unknown	2008		No
WP: Turnaround /Outage Dumpsters	Misc. Storage Container	~~023~~423	Unknown	N/A	-	0	Unknown	2008		No
WP: Salvage Yard Piles	Misc. Storage Container (SWMU 16)	~~024~~424	Unknown	N/A	-	0	Unknown			Yes
WP: Dumpsters (Paint Shop)	Misc. Container	~~025~~425	Unknown	N/A	-	0	Unknown	2008		No
WP: Waste Piles Near Paint Shop	Waste Pile (SWMU 20)	~~026~~426	Unknown	N/A	-	0	Unknown			Yes
WP: Abandoned Cooling Tower Basin	Waste Pile (SWMU 17)	~~027~~427	N/A	N/A	N/A	0	N/A			No
WP: Main Sewer Dump Station	Discharge to Sewer/POTW or NPDES	~~028~~428	Unknown	N/A	-	0	Unknown	2010		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Maintenance Shop Dumpsters	Misc. Container	~~029~~429	Unknown	N/A	-	0	Unknown	2008		No
WP: Storeroom Dumpsters	Misc. Container	~~030~~430	Unknown	N/A	-	0	Unknown	2008		No
~~**West Property Paper Mill – NOR 86155**~~										
~~Dumpster (Cafeteria, Labs, Offices)~~	~~Misc. Container~~	~~001~~	~~1999~~	~~N/A~~	~~8 cy~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~
~~Dumpster (Machine Shops)~~	~~Misc. Container~~	~~002~~	~~1999~~	~~N/A~~	~~8 cy~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~
	~~Misc. Container~~	~~003~~	~~1999~~	~~N/A~~	~~6 cy~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~
~~Dumpster (Water Treatment Plant)~~	~~Misc. Container~~	~~004~~	~~1999~~	~~N/A~~	~~6 cy~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~
~~Dumpster (Carpenter Shop)~~	~~Misc. Container~~	~~005~~	~~1999~~	~~N/A~~	~~4 cy~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~
~~Dumpster (Storeroom)~~	~~Misc. Container~~	~~006~~	~~1999~~	~~N/A~~	~~8 cy~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~
~~Dumpster (Storeroom)~~	~~Misc. Container~~	~~007~~	~~1999~~	~~N/A~~	~~8 cy~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
~~Dumpster (24 Machine Maint. Shops)~~	~~Misc. Container~~	~~008~~	~~1999~~	~~N/A~~	~~8 cy~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~
~~Dumpster (24 Machine)~~	~~Misc. Container~~	~~009~~	~~1999~~	~~N/A~~	~~6 cy~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~
~~Dumpster (Contractor Hill Dumpster)~~	~~Misc. Container~~	~~010~~	~~1999~~	~~N/A~~	~~8 cy~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~
~~Roll-off Dumpster (24 Machine)~~	~~Misc. Container~~	~~011~~	~~1999~~	~~N/A~~	~~30 cy~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~
~~Roll-off Dumpster (24 Machine)~~	~~Misc. Container~~	~~012~~	~~1999~~	~~N/A~~	~~30 cy~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~
~~Roll-off Dumpster (24 Machine)~~	~~Misc. Container~~	~~013~~	~~1999~~	~~N/A~~	~~30 cy~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~
~~Roll-off Dumpster (24 Machine)~~	~~Misc. Container~~	~~014~~	~~1999~~	~~N/A~~	~~40 cy~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~
~~Roll-off Dumpster (Mobile Shop)~~	~~Misc. Container~~	~~015~~	~~1999~~	~~N/A~~	~~30 cy~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
~~Roll-off Dumpster (Mobile Shop)~~	~~Misc. Container~~	~~016~~	~~1999~~	~~N/A~~	~~30 cy~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~
~~Roll-off Dumpster (Truck Staging Area)~~	~~Misc. Container~~	~~017~~	~~1999~~	~~N/A~~	~~30 cy~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~
~~Roll-off Dumpster (Storeroom Dumpster)~~	~~Misc. Container~~	~~018~~	~~1999~~	~~N/A~~	~~30 cy~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~
~~Waste Piles in Salvage Yard~~	~~Waste Pile (SWMU 16)~~	~~019~~	~~1999~~	~~N/A~~	~~-~~	~~0~~				~~Yes~~
~~Waste Piles near Paint Shop~~	~~Waste Pile (SWMU 20)~~	~~020~~	~~1999~~	~~N/A~~	~~-~~	~~0~~	~~Unknown~~			~~Yes~~
~~Container Storage Area~~	~~Container Storage Area~~	~~021~~	~~1999~~	~~N/A~~	~~-~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~
~~Container Storage Area*~~	~~Container Storage Area~~	~~022~~	~~1999~~	~~D001, D002, D018, D039, D040, F003, F005~~	~~-~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
~~Enclosed Dumpsters for Asbestos Waste~~	~~Misc. Container~~	~~023~~	~~1999~~	~~N/A~~	~~40 cy~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~
~~Storage Area for Asbestos Containing Materials~~	~~Container Storage Area (SWMU 18)~~	~~024~~	~~1999~~	~~N/A~~	~~-~~	~~0~~	~~Unknown~~			~~No~~
~~Safety-Kleen Parts Washer (Pump Shop)~~	~~Tank~~	~~025~~	~~1999~~	~~D001, D018, D039, D040~~	~~30 gal~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~
~~Safety-Kleen Parts Washer (Mobile Shop)~~	~~Tank~~	~~026~~	~~1999~~	~~D001, D018, D039, D040~~	~~30 gal~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~
~~Safety-Kleen Parts Washer (Mobile Shop)~~	~~Tank~~	~~027~~	~~1999~~	~~D001, D018, D039, D040~~	~~30 gal~~	~~0~~	~~Unknown~~	~~2010~~		~~No~~
Areas of Concern (AOCs)										
Refinery: Groundwater Region 7	AOC 10	-	N/A	N/A	N/A	N/A	N/A			Yes

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Groundwater Regions 1, 2, 3, 4, 5, and 6	AOC 11	-	N/A	N/A	N/A	N/A	N/A			Yes
WP: West Property Groundwater PMZ	AOC 21	-	N/A	N/A	N/A	N/A	N/A			Yes
RBTF: Historical Tank Footprint	AOC 24	-	N/A	N/A	N/A	N/A	N/A			Unknown
RBTF: Aboveground Pipingelines	AOC 25	-	N/A	N/A	N/A	N/A	N/A			Yes
RBTF: Former Truck Loading Terminal	AOC 26	-	N/A	N/A	N/A	N/A	N/A			Unknown
RBTF: City of Pasadena Laydown Storage Yard	AOC 27	-	N/A	N/A	N/A	N/A	N/A			Unknown

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
~~West Property~~ WP: Aboveground Tanks and Surface Conveyance Feature	AOC 28	-	N/A	N/A	N/A	N/A	N/A			Unknown
~~West Property~~WP: Former Roof Shingle Production Area	AOC 29	-	N/A	N/A	N/A	N/A	N/A			Unknown
~~West Property Former Roll-off Bin Storage~~	~~AOC 30~~	~~-~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~			~~Unknown~~
~~South Property~~SP: Fuel Storage Tanks	AOC ~~31~~30	-	N/A	N/A	N/A	N/A	N/A			Unknown
SP: Former Concrete Batch Plant ~~Chemical Storage~~Equipment	AOC ~~32~~31	-	N/A	N/A	N/A	N/A	N/A			Unknown

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
~~South Property~~SP: Former Pond 1	AOC ~~33~~32	-	N/A	N/A	N/A	N/A	N/A			Unknown
~~South Property~~SP: Former Pond 2	AOC ~~34~~33	-	N/A	N/A	N/A	N/A	N/A			Unknown
~~South Property~~SP: Former Pond 3	AOC ~~35~~34	-	N/A	N/A	N/A	N/A	N/A			Unknown
~~South Property~~SP: Equipment Washdown Pad and Sump	AOC ~~36~~35	-	N/A	N/A	N/A	N/A	N/A			Unknown

1 Indicate by asterisk (*) those waste management units that have received any hazardous waste constituent listed in Appendix VIII of 40 CFR Part 261.
2 For the purposes of this Compliance Plan Application, a waste management unit receiving hazardous waste after July 26, 1982 shall be considered a Regulated Unit. A waste management unit that ceased receiving hazardous waste on or before that date shall be considered a Solid Waste Management Unit (SWMU).
3 Date the applicant submitted certification of closure to the Commission.
4 Hazardous constituents are those hazardous constituents listed in Appendix IX of 40 CFR Part 264.

CP Table I - Waste Management Units and Areas Subject to Groundwater Corrective Action and Compliance Monitoring

A. Corrective Action[1] (30 TAC Section 335.166)

Unit Name	Notice of Registration (NOR) Number, if applicable	Date Program Requirement and Remedy Standard Completed[4]
~~Ponds Waste Management Area~~	~~Stormwater Pond (002); Bauxite Pond (007)~~	

B. Compliance Monitoring[1] (30 TAC Section 335.165)

Unit Name	Notice of Registration (NOR) Number, if applicable	Date Program Requirement and Remedy Standard Completed[4]
Moat	001	

C. Corrective Action[2] (30 TAC Section 335.167)

Unit Name	Notice of Registration (NOR) Number, if applicable	Date Program Requirement and Remedy Standard Completed[4]
Refinery: Groundwater Region 7 PMZ	N/A	
WP: West Property Groundwater PMZ	~~N/A~~320/414/417/426	

D. Alternative Corrective Action[3] (30 TAC Section 335.151)

Unit Name	Notice of Registration (NOR) Number, if applicable	Date Program Requirement and Remedy Standard Completed[4]
Refinery: Site-Wide PMZ (Groundwater Regions 1, 2, 3, 4, 5, and 6)	N/A	
Ponds Waste Management Area	Stormwater Pond (002); Bauxite Pond (007)	

E. Facility Operations Area (FOA)[4] (30 TAC Section 335.156 and Chapter 350)

RESERVED

Foot Note:

1. Program applies to RCRA-regulated units only.
2. Program applies to releases from solid waste management units (SWMUs) and/or areas of concern (AOCs).
3. Program applies to commingled releases from RCRA-regulated unit and from one or more SWMUs and/or AOCs.
4. List SWMUs, additional units/areas of Investigation, AOCs, RCRA-regulated units within the FOA that are subject to corrective action. For RCRA units, SWMUs and/ or AOC outside the FOA boundary for which compliance monitoring and/ or corrective action applies should be listed separately in Items A, B or C as appropriate.

5. For the purpose of maintaining a historical record to verify the units/areas have met the program requirements in accordance with Permit Provisions XI.A.2, XI.A.3., XI.A.4. and/or XI.A.5., the permittee shall update CP Table I to reflect the new status of the unit/area to include the remedy standard achieved for all media of concern and the date of the Commission's No Further Action (NFA) approval letter. The units/area shall not be deleted from CP Table I until the program objectives have been completed and no further action has been approved through modification or amendment to the Permit.

CP Table II: Solid Waste Management Units and/or Areas of Concern Addressed in Permit Section XI.H. for which Corrective Action Applies Pursuant to 30 TAC Section 335.167

Unit Name	NOR Number, if applicable	SWMU or AOC	Affected Media[1]	Date Program Requirement and Remedy Standard Completed
Refinery: Tank Fire Walls (consisting of 33 tanks: 1, 2, 47 (removed), 50, 51, 85, 97, 202, 203, 204, 206, 314 to 317, 319 to 327, 330 (formerly 207), 331, 332, 348, 811, 820, and 824 to 826)		SWMU 1	GW and Soil	
Refinery: Buried Cell Near the Bauxite Pond		SWMU 2	Soil	NFA approved 09/07/2006; Risk Reduction Rule Standard 3 (RRR3)
Refinery: Trap No. 2 Sump	015	SWMU 3	Soil	NFA approved 09/07/2006; RRR3
Refinery: Waste Pile Containing Coke at Gate 14	005	SWMU 4	Soil	NFA approved 09/07/2006; RRR3
Refinery: Area Immediately Surrounding the Bauxite Pond		SWMU 5	Soil	NFA approved 09/07/2006; RRR3
Refinery: Dehydrator Tank Fire Walls		SWMU 6	Soil	
Refinery: Maintenance Area Ditch		SWMU 7	Soil	
Refinery: Detol Pad		SWMU 8	Soil	
Refinery: Sandblast Grit Pile		SWMU 9	Soil	NFA approved 09/07/2006; RRR3
Refinery: Groundwater Region 7 PMZ		AOC 10	GW	
Refinery: Site-Wide PMZ (Groundwater Regions 1, 2, 3, 4, 5, and 6)		AOC 11	GW	
Refinery: Tanks 203 and 204		SWMU 12	GW and soil	

Refinery: Tank 97	013	SWMU 13	GW and soil	
RBTF: Tank 830		SWMU 14	Pending	
Refinery: Tank 307		SWMU 15	Pending	
WP: ~~PP024/PM019~~Salvage Yard Piles	~~024*/019**~~319/424	SWMU 16	Soil	
WP: ~~PP027~~Abandoned Cooling Tower Basin	~~027*~~427	SWMU 17	Pending	
WP: ~~PP002/PM024~~Storage Area for Asbestos Containing Materials	~~002*/024**~~324/402	SWMU 18	Soil	
WP: ~~PP017~~Incinerator	~~017*~~417	SWMU 19	GW and Soil	
WP: ~~PP026/PM020~~Waste Piles Near Paint Shop	~~026*/020**~~320/426	SWMU 20	GW and Soil	
WP: West Property Groundwater PMZ	320/414/417/426	AOC 21	GW	
WP: ~~PP014~~Paint Storage Room	~~014*~~414	SWMU 22	GW and Soil	
RBTF: Storm Water System		SWMU 23	Pending	
RBTF: Historical Tank Footprint		AOC 24	Pending	
RBTF: Aboveground Piping		AOC 25	Pending	
RBTF: Former Truck Loading Terminal		AOC 26	Pending	
RBTF: City of Pasadena Laydown Storage Yard		AOC 27	Pending	
WP: Aboveground Tanks and Surface Conveyance Feature		AOC 28	Pending	
WP: Former Roof Shingle Production Area		AOC 29	Pending	
SP: Fuel Storage Tanks		AOC 30	Pending	
SP: Former Concrete Batch Plant Equipment		AOC 31	Pending	
SP: Former Pond 1		AOC 32	Pending	
SP: Former Pond 2		AOC 33	Pending	
SP: Former Pond 3		AOC 34	Pending	
SP: Equipment Washdown Pad and Sump		AOC 35	Pending	

Refinery = SWMU or AOC located on Main Refinery

RBTF = SWMU or AOC located on Red Bluff Tank Farm

WP = SWMU or AOC located on West Property

SP = SWMU or AOC located on South Property

~~***= NOR Number assigned on NOR 30582 – Pulp Mill**~~

~~****= NOR Number assigned on NOR 86155 – Paper Mill**~~

SWMU= Solid Waste Management Unit

AOC= Area of Concern

Foot Note:

1. Specify the affected media [i.e. soil, groundwater (GW), surface water (SW), sediment (SED)].
2. For each SWMU or AOC, specify the Remedy Standard that was completed and the date of the Commission's No Further Action (NFA) letter for the media of concern.
3. For sites with FOA authorization, list the SWMUs and/or AOCs that are subject to corrective action at the site. Please separate the SWMUs and/or AOCs that are located within the FOA boundary from the SWMUs and/or AOCs that are located outside of the FOA boundary.

Note:

CP Table II lists SWMUs and/or AOCs which have been identified in the RCRA Facility Assessment (RFA) Report as having a release(s) or a potential release(s) of hazardous waste, hazardous constituents, or other constituents of concern. The permittee is thus required to meet Corrective Action Objectives for the SWMUs and/or AOCs in accordance with Permit Section XI.H. and 30 TAC Section 335.167.

The permittee shall update CP Table II when a new SWMU and/or AOC that requires corrective action is identified. The permittee shall also update CP Table II as outlined in Footnote 2 when the corrective action status of a media for a SWMU or AOC has changed.

SWMUs and/or AOCs shall not be deleted from this table when the Corrective Action Objectives have been completed and a No Further Action (NFA) determination has been approved for the SWMU and/or AOC. In accordance with Permit Section XI.H., CP Table II is intended to be a historical record of the facility's corrective actions and to reflect when the Corrective Action Objectives have been met for each SWMU/AOC.

There may be cases in which the permittee fulfills the Corrective Action Objectives for soils at a SWMU/AOC, but long-term groundwater monitoring and corrective action may be necessary to meet the groundwater Corrective Action Objectives. In such instances, the SWMU/AOC would be listed in CP Table I, Item C, and would be subject to all applicable provisions of this Compliance Plan. If a release from a SWMU/AOC is commingled with a RCRA-regulated unit, then the unit and the SWMU/AOC would be listed in CP Table I, Item D. In accordance with Permit Section XI.H., once the Corrective Action Objectives for groundwater are completed, the permittee shall modify or amend the Compliance Plan to reassign the SWMU/AOC in CP Table I, Item C or Item D, to CP Table II. CP Table II should reflect the new status of the SWMU/AOC. It should include the Remedy Standard achieved for all media of concern and the date of the Commission's NFA approval letter for each SWMU/AOC.

Permittee: Pasadena Refining System, Inc.

CP Table III: Corrective Action Program Table of Detected Hazardous and Solid Waste Constituents and the Groundwater Protection Standard

Unit Name	**Column A** Hazardous Constituents	**Column B** Groundwater Protection Standards (mg/l) at the POC[2]		**Column C** Groundwater Protection Standards (mg/l) at the POE or APOE, or FBOC[1,2]	
Ponds WMA	Benzene	0.588	SW GW	0.00	N/A
	o-Cresol	60	SW GW	0.00	N/A
	m- and p-Cresol	60	SW GW	0.00	N/A
	2,4-Dimethylphenol	9.41	SW GW	0.00	N/A
	Ethylbenzene	29.3	SW GW	0.00	N/A
	2-Methylnaphthalene	3.53	SW GW	0.00	N/A
	Naphthalene	14.7	SW GW	0.00	N/A
	Phenol	324	SW GW	0.00	N/A
	Toluene	56.5	SW GW	0.00	N/A
	Xylenes	100	SW GW	0.00	N/A
	1,2-Dichloroethane	11.6	SW GW		N/A
	Chloroethane	9.8	GW GW ING		N/A
	Vinyl Chloride	0.002	GW GW ING		N/A
	Benzo(a) pyrene	0.01	SW GW		N/A
	Chrysene	0.01	SW GW		N/A
	Lead	0.624	SW GW		N/A
	Chromium	5.84	SW GW		N/A
Refinery: Site-Wide PMZ (Groundwater Regions 1, 2, 3, 4, 5, & 6)	Benzene	0.588	SW GW	0.588	SW GW
	Benzo(a)anthracene	0.01	SW GW ND	0.01	SW GW ND
	Bis(2-ethylhexyl)phthalate	2.59	SW GW	2.59	SW GW SW GW
	1,2-Dichloroethane	4.30	SW GW	4.30	SW GW SW GW
	Ethylbenzene	29.3	SW GW	29.3	SW GW SW GW
	Methyl t-butyl ether (MTBE)	28.2	SW GW	28.2	SW GW SW GW

Unit Name	**Column A** Hazardous Constituents	**Column B** Groundwater Protection Standards (mg/l) at the POC [2]		**Column C** Groundwater Protection Standards (mg/l) at the POE or APOE, or FBOC[1,2]	
	2-Methylnaphthalene	3.53	SW GW	3.53	SW GW SW GW
	Naphthalene	14.7	SW GW	14.7	SW GW SW GW
	Toluene	56.5	SW GW	56.5	SW GW SW GW
	Xylenes	100	SW GW	100	SW GW SW GW
	Arsenic	0.165	SW GW	0.165	SW GW SW GW
	Chromium	5.84	SW GW	5.84	SW GW SW GW
	Lead	0.624	SW GW	0.624	SW GW SW GW
	Vanadium	10.6	SW GW	10.6	SW GW SW GW
Refinery: Groundwater Region 7 PMZ	Benzene	0.005	GW GW ING	0.005	GW GW ING GW GW ING
	Benzo(a)anthracene	0.01-0091	GW GW ING ND	0.01-0091	GW GW ING ND
	o-Cresol	1.2	GW GW ING GW GW ING	1.2	GW GW ING GW GW ING
	m- and p-Cresol	0.12	GW GW ING GW GW ING	0.12	GW GW ING GW GW ING
	1,2-Dichloroethane	0.010.005	GW GW ING GW GW ING	0.010.005	GW GW ING GW GW ING
	Diethylphthalate	20	GW GW ING GW GW ING	20	GW GW ING GW GW ING
	2,4-Dimethylphenol	0.049	GW GW ING GW GW ING	0.049	GW GW ING GW GW ING
	Ethylbenzene	0.7	GW GW ING GW GW ING	0.7	GW GW ING GW GW ING

Unit Name	**Column A** - Hazardous Constituents	**Column B** Groundwater Protection Standards (mg/l) at the POC [2]		**Column C** Groundwater Protection Standards (mg/l) at the POE or APOE, or FBOC[1,2]	
	Methyl Ethyl Ketone (2-Butanone)	15	GW GW ING~~GW GW ING~~	15	GW GW ING~~GW GW ING~~
	2-Methylnaphthalene	0.098	GW GW ING~~GW GW ING~~	0.098	GW GW ING~~GW GW ING~~
	Naphthalene	0.49	GW GW ING~~GW GW ING~~	0.49	GW GW ING~~GW GW ING~~
	Toluene	1	GW GW ING~~GW GW ING~~	1	GW GW ING~~GW GW ING~~
	Xylenes	10	GW GW ING~~GW GW ING~~	10	GW GW ING~~GW GW ING~~
	Arsenic	0.01	GW GW ING~~GW GW ING~~	0.01	GW GW ING~~GW GW ING~~
	Barium	2	GW GW ING~~GW GW ING~~	2	GW GW ING~~GW GW ING~~
	Chromium	0.1	GW GW ING~~GW GW ING~~	0.1	GW GW ING~~GW GW ING~~
	Lead	0.015	GW GW ING~~GW GW ING~~	0.015	GW GW ING~~GW GW ING~~
	Nickel	0.49	GW GW ING~~GW GW ING~~	0.49	GW GW ING~~GW GW ING~~
	Vanadium	0.0~~01 7~~44	GW GW ING~~GW GW ING~~	0.~~0017~~ 044	GW GW ING~~GW GW ING~~
	Zinc	7.3	GW GW ING~~GW GW ING~~	7.3	GW GW ING~~GW GW ING~~
WP: West Property Groundwater PMZ	Benzene	0.005	GW GW ING~~MCL~~	0.005	GW GW ING~~MCL~~

Unit Name	**Column A** Hazardous Constituents	**Column B** Groundwater Protection Standards (mg/l) at the POC[2]		**Column C** Groundwater Protection Standards (mg/l) at the POE or APOE, or FBOC[1,2]	
	Pentachlorophenol	0.001	GW GW ING MCL	0.001	GW GW ING MCL
	Tetrachloroethene	0.005	GW GW ING MCL	0.005	GW GW ING MCL
	Trichloroethene	0.005	GW GW ING MCL	0.005	GW GW ING MCL
	1,1-Dichloroethene	0.007	GW GW ING	0.007	GW GW ING
	cis-1,2-Dichloroethene	0.07	GW GW ING	0.07	GW GW ING
	trans-1,2-Dichloroethene	0.1	GW GW ING	0.1	GW GW ING
	Vinyl Chloride	0.002	GW GW ING MCL	0.002	GW GW ING MCL
	Dioxin/Furan (as 2,3,7,8-TCDDD toxicity equivalent quotients)	3 x 10-8 TEQ	GW GW ING MCL	3 x 10-8 TEQ	GW GW ING MCL
	Arsenic	0.01	GW GW ING MCL	0.01	GW GW ING MCL
	Polychlorinated Biphenyls	0.0005	GW GW ING	0.0005	GW GW ING
	Lead	0.015	GW GW ING	0.015	GW GW ING
	Chlorine	0.00	AIR GW Inh-V	0.00	AIR GW Inh-V

NNotes:

a) –If the Corrective Action Program (Provision XI.E.) does not apply to the RCRA-regulated units, SWMUs, or AOCs at the facility, mark "Reserved" next to the CP Table III heading.

b) CP) CP Table III represents the long list of hazardous constituents that are reasonably expected to be in, or derived from, the waste placed in each RCRA-regulated unit, SWMU, and/or AOC listed in the table. CP Table III also lists the hazardous constituents that have been historically detected in the groundwater for each RCRA-regulated unit, SWMU, and/or AOC. These hazardous constituents are monitored in

accordance with Provision XI.F.3.c.(1).

c) In accordance with Provision XI.D.6., the Groundwater Protection Standards (GWPS) must be met before the RCRA-regulated unit, SWMU, and/or AOC can exit the Corrective Action Program.

d) If applicable, "Appendix IX" can be used in Column A for a unit instead of listing each chemical of concern (COC). The permittee may petition the Executive Director for the deletion of a specific COC from the Appendix IX analysis if the permittee can demonstrate that the COC was never used in the facility's operations nor was disposed of in the waste management area.

e) Attenuation monitoring point (AMP) wells, corrective action system (CAS) wells, and corrective action observation (CAO) wells should not be listed in CP Table III. These wells should only ~~be depicted~~be depicted in the CP Attachment A maps. Once an AMP, CAS, or CAO well meets its respective attenuation action levels (AALs) or GWPS, then the Permittee may propose to discontinue monitoring that well without modification to the Permit. If the AMP, CAS, or CAO well is listed in CP Table III, then any proposed change to the well would require modification to the Permit. Changes to the wells depicted in the CP Attachment A maps can be approved in the Groundwater Monitoring Report required by CP Table VII and become a part of the Permit by reference.

Footnotes:

1. Use Column C to specify the GWPS assigned at a POE or APOE (i.e. for sites with MNA or PMZ proposals as applicable under TRRP), or FBOC for those sites with FOA authorization. Put "N/A" if a specific program or column item is not applicable.
2. For each COC, select the appropriate GWPS designation and definition to demonstrate that the corrective action program objectives are being achieved either under the Risk Reduction Rules (RRR) pursuant to 30 TAC Chapter 335 or the Texas Risk Reduction Program (TRRP) pursuant to 30 TAC Chapter 350. The RRR and TRRP GWPS designations and definitions may not be ~~combined pursuant~~combined pursuant to 30 TAC Section 350.2(m).

TR~~R~~RP~~R~~ GWPS Designations and Definitions

~~GW~~GW_{Ing} ~~SC~~	ACL pursuant to 30 TAC §335.160(b) based upon the PCL determined under RSA or RSB (Residential or Commercial /Industrial) for Class 1 or Class 2 Groundwater ingestion PCL of 30 TAC Chapter 350. The PCL value, Column B, will change as updates to the rule are promulgated. Changes to the rule automatically change the concentration value established in Column B in this table.. In accordance with §350.72(b), GWGWIng, PCLs may need to be adjusted to lower concentrations to meet the cumulative carcinogenic risk level (less than or equal to 1x10-4) and hazard index criteria (less than or equal to 10) when there are more than 10 carcinogenic and/or more than 10 non-carcinogenic chemicals of concern within a source medium. ~~ACL pursuant to 30 TAC Section 335.160(b) based upon the groundwater Medium-Specific Concentration (MSC), Residential (or Industrial) Risk Reduction Standard No. 2 (or No. 3) specified in 30 TAC Section 335 Subchapter S.~~
MCL	ACL pursuant to 30 TAC §335.160(b) based upon the Protective PCL determined under RSA or RSB for Groundwater- to-surface water PCL of 30 TAC Chapter 350. The PCL value, Column B, will change as updates to the rule are promulgated. Changes to the rule automatically change the concentration value established in Column B in this table. ~~ACL pursuant to 30 TAC Section 335.160(b) based upon the Groundwater Maximum Contaminant Level (MCL) specified in 40 CFR Part 141, National Primary Drinking Water Regulations Subparts B and G.~~
~~SMCL~~	

~~ALC~~	~~n the Groundwater Secondary Maximum Contaminant Level (SMCL) specified in 40~~
~~purs~~	~~CFR Part 143, National Secondary Drinking Water Regulations.~~
~~uant~~	
~~to~~	~~ACL pursuant to 30 TAC Section 335.160(b) based upon the Action Level (AL) specified in~~
~~30~~	~~40 CFR Part 141, National Primary Drinking Water Regulations Subpart I.~~
~~TAC~~	
~~Secti~~	~~Background as determined in accordance with Provision XI.F.1.~~
~~on~~	
~~335.~~	~~Non-detectable at the PQL as determined by the analytical methods of the most recent~~
~~160(~~	~~edition of EPA SW-846, and as listed in the July 8, 1987 edition of the Federal Register and~~
~~b)~~	~~later editions. PQL is indicated in parentheses. PQL is the lowest concentration of an~~
~~base~~	~~analyte in groundwater that can be reliably determined within specified limits of precision~~
~~d~~	~~and accuracy by the indicated methods under routine laboratory operating conditions.~~
~~upo~~	

CP Table IIIA: Corrective Action Program Table of Indicator Parameters and the Groundwater Protection Standard

Unit Name	**Column A** Hazardous Constituents	**Column B** Groundwater Protection Standards (mg/l) at POC[2]		**Column C** Groundwater Protection Standards (mg/l) at the POE or APOE, or FBOC[1,2]	
Ponds WM Area	Benzene	0.588	SW GW	0.00	N/A
	2-Methylnaphthalene	3.53	SW GW	0.00	N/A
	Naphthalene	14.7	SW GW	0.00	N/A
Refinery: Site-Wide PMZ (Groundwater Regions 1, 2, 3, 4, 5, and 6)	Benzene	0.588	SW GW	0.588	SW GW
	Benzo(a)anthracene	ND 0.01	SW GW	ND (0.01) 0.01	SW GW
	Methyl-t-butyl ether (MTBE)	28.2	SW GW	28.2	SW GW
	2-Methylnaphthalene	3.53	SW GW	3.53	SW GW
	Naphthalene	14.7	SW GW	14.7	SW GW
	Toluene	56.5	SW GW	56.5	SW GW
	Lead	0.624	SW GW	0.624	SW GW
Refinery: Groundwater Region 7 PMZ	Benzene	0.005	GW GW ING	0.005	GW GW ING
	Benzo(a)anthracene	ND (0.01) 0.0091	GW GW ING	ND (0.01) 0.0091	GW GW ING
	m- and p-Cresol	0.12	GW GW ING	0.12	GW GW ING
	1, 2-Dichloroethane	0.005	GW GW ING	0.005	GW GW
	Toluene	1	GW GW ING	1	GW GW
	Arsenic	0.01	GW GW ING	0.01	GW GW
	Chromium	0.1	GW GW ING	0.1	GW GW
	Lead	0.015	GW GW ING	0.015	GW GW
	Vanadium	0.0017	GW GW ING	0.0017 044	GW GW ING
WP: West Property Groundwater PMZ	Arsenic	0.01	GW GW ING	0.01	GW GW ING
	Benzene	0.005	GW GW ING	0.005	GW GW
	Pentachlorophenol	0.001	GW GW ING	0.001	GW GW
	Tetrachloroethene	0.005	GW GW ING	0.005	GW GW NG
	Trichloroethene	0.005	GW GW ING	0.005	GW GW ING
	Vinyl Chloride	0.002	GW GW ING	0.002	GW GW ING

Notes:

a) If the Corrective Action Program (Provision XI.E.) does not apply to the RCRA-regulated units, SWMUs, or AOCs at the facility, mark "Reserved" next to the CP Table III heading.

b) CP Table III represents the long list of hazardous constituents that are reasonably expected to be in, or derived from, the waste placed in each RCRA-regulated unit, SWMU, and/or AOC listed in the table. CP Table III also lists the hazardous constituents that have been historically detected in the groundwater for each RCRA-regulated unit, SWMU, and/or AOC. These hazardous constituents are monitored in accordance with Provision XI.F.3.c.(1).

c) In accordance with Provision XI.D.6., the Groundwater Protection Standards (GWPS) must be met before the RCRA-regulated unit, SWMU, and/or AOC can exit the Corrective Action Program.

d) If applicable, "Appendix IX" can be used in Column A for a unit instead of listing each chemical of concern (COC). The permittee may petition the Executive Director for the deletion of a specific COC from the Appendix IX analysis if the permittee can demonstrate that the COC was never used in the facility's operations nor was disposed of in the waste management area.

e) Attenuation monitoring point (AMP) wells, corrective action system (CAS) wells, and corrective action observation (CAO) wells should not be listed in CP Table III. These wells should only be depicted in the CP Attachment A maps. Once an AMP, CAS, or CAO well meets its respective attenuation action levels (AALs) or GWPS, then the Permittee may propose to discontinue monitoring that well without modification to the Permit. If the AMP, CAS, or CAO well is listed in CP Table III, then any proposed change to the well would require modification to the Permit. Changes to the wells depicted in the CP Attachment A maps can be approved in the Groundwater Monitoring Report required by CP Table VII and become a part of the Permit by reference.

Footnotes:

1. Use Column C to specify the GWPS assigned at a POE or APOE (i.e. for sites with MNA or PMZ proposals as applicable under TRRP), or FBOC for those sites with FOA authorization.

   Put "N/A" if a specific program or column item is not applicable.

2. For each COC, select the appropriate GWPS designation and definition to demonstrate that the corrective action program objectives are being achieved either under the Risk Reduction Rules (RRR) pursuant to 30 TAC Chapter 335 or the Texas Risk Reduction Program (TRRP) pursuant to 30 TAC Chapter 350. The RRR and TRRP GWPS designations and definitions may not be combined pursuant to 30 TAC Section 350.2(m).

   ACL = alternative concentration limit; PQL = practical quantitation limit; PCL = protective concentration level; RSA = Remedy Standard A; RSB = Remedy Standard B

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~~b) CP Table III represents the long list of hazardous constituents that are reasonably expected to be in, or derived from, the waste placed in each RCRA regulated unit, SWMU, and/or AOC listed in the table. CP Table III also lists the hazardous constituents that have been historically detected in the groundwater for each RCRA regulated unit, SWMU, and/or AOC. These hazardous constituents are monitored in accordance with Provision XI.F.3.c.(1).~~

~~c) In accordance with Provision XI.D.6., the Groundwater Protection Standards (GWPS) must be met before the RCRA regulated unit, SWMU, and/or AOC can exit the Corrective Action Program.~~

~~d) If applicable, "Appendix IX" can be used in Column A for a unit instead of listing each chemical of concern (COC). The permittee may petition the Executive Director for the deletion of a specific COC from the Appendix IX analysis if the permittee can demonstrate that the COC was never used in the facility's operations nor was disposed of in the waste management area.~~

~~e) Attenuation monitoring point (AMP) wells, corrective action system (CAS) wells, and corrective action observation (CAO) wells should not be listed in CP Table III. These wells should only be depicted in the CP Attachment A maps. Once an AMP, CAS, or CAO well meets its respective attenuation action levels (AALs) or GWPS, then the Permittee may propose to discontinue monitoring that well without modification to the Permit. If the AMP, CAS, or CAO well is listed in CP Table III, then any proposed change to the well would require modification to the Permit. Changes to the wells depicted in the CP Attachment A maps can be approved in the Groundwater Monitoring Report required by CP Table VII and become a part of the Permit by reference.~~

CP Table IV: Compliance Monitoring Program Table of Hazardous and Solid Waste Constituents and Quantitation Limits

Unit Name	Column A Hazardous Constituents[2]	Column B Concentration Limits (mg/l)[1]	
Moat	Chromium	ND (0.01) ~~ND~~	ND
	Lead	ND (0.01) ~~ND~~	ND
	Benzene	ND (0.001) ~~ND~~	ND
	Ethylbenzene	ND (0.001) ~~ND~~	ND
	1,1,1-Trichloroethane	ND (0.005) ~~ND~~	ND
	Xylenes	ND (0.001) ~~ND~~	ND
	o-Cresol	ND (0.000571) ~~ND~~	ND
	m- and p-Cresols	ND (0.000571) ~~ND~~	ND
	Naphthalene	ND (0.000571) ~~ND~~	ND
	Phenol	ND (0.00114) ~~ND~~	ND
	Benzo(a)pyrene	ND (0.000286)	ND
	Chrysene	ND (0.000571)	ND
	1,2-Dichloroethane	ND (0.001)	ND
	1,1-Dichloroethene	ND (0.001)	ND
	Chloroethane	ND (0.01)	ND
	Ethane	ND (0.005)	ND
	Vinyl Chloride	ND (0.002)	ND
	Barium	ND (0.01)	ND
	Toluene	ND (0.001)	ND

Notes:

a) If there are no RCRA-regulated units subject to the Compliance Monitoring Program , mark “Reserved” next to the CP Table IV heading.

b) CP Table IV represents the long list of hazardous constituents that are reasonably expected to be in, or derived from, waste placed in a RCRA-regulated unit, but may not be detected in groundwater above the constituents' respective quantitation limits.

c) CP Table IV constituents are to be monitored annually in accordance with Provision XI.F.3.(2). Any CP Table IV constituents detected in the groundwater should be carried over to CP Table IVA.

Footnotes:

1) For each constituent of concern, select the appropriate quantitation limit designation and definition according to either the Risk Reduction Rules (RRR) pursuant to 30 TAC

Chapter 335 or the Texas Risk Reduction Program (TRRP) pursuant to 30 TAC Chapter 350.

2) If applicable, "Appendix IX" can be used in Column A for a unit instead of listing each chemical of concern (COC). The permittee may petition the Executive Director for the deletion of a specific COC from the Appendix IX analysis if the permittee can demonstrate that the COC was never used in the facility's operations nor was disposed of in the waste management area.

~~RRR~~ TRRP Quantitation Limit Designations and Definitions

BKG Background as determined in accordance with 30 TAC 350.4(a)(6).

ND Non-detectable at MQL as determined by the analytical methods of the EPA SW-846 most recent edition, and as listed in the July 8, 1987 edition of the Federal Register and later editions. MQL is indicated in parentheses. MQL is defined in 30 TAC §350.4 (54) as the lowest non-zero concentration standard in the laboratory's initial calibration curve and is based on the final volume of extract (or sample) used by the laboratory.~~ND- Non-detectable at practical quantitation limit (PQL) as determined by the analytical methods of the most recent edition of EPA SW-846 and as listed in the July 8, 1987 edition of the Federal Register and later editions. PQL is indicated in parentheses.~~

~~PQL is the lowest concentration of an analyte in groundwater that can be reliably determined within specified limits of precision and accuracy by the indicated methods under routine laboratory operating conditions.~~

~~BKG Background as determined in accordance with Provision XI.F.1.~~

CP Table IVA: Compliance Monitoring Program Table of Detected Hazardous Constituents and the Groundwater Protection Standard

Unit Name	Column A Hazardous Constituents	Column B Concentration Limits (mg/l)	
Moat	Barium	2	$^{GW}GW_{Ing}$ ~~MCL~~
	Toluene	1	$^{GW}GW_{Ing}$ ~~MCL~~

Notes:

a) If there are no RCRA-regulated units subject to the Compliance Monitoring Program (Provision ?), mark "Reserved" next to the CP Table IVA heading.

b) CP Table IVA represents the short list of hazardous constituents detected in groundwater above the quantitation limits specified in CP Table IV.

c) CP Table IVA constituents are monitored semiannually in accordance with Provision XI.F.3.c.(2) to verify that the groundwater protection standards (GWPS) are being met.

Footnotes:

1. Use Column C, specify the GWPS assigned at a POE or APOE (i.e. as applicable under TRRP). (i.e. modify Table and Footnotes to support the establishment of GWPS at POC, POE or APOE monitoring points, as appropriate). Put "N/A" if a specific program or column item is not applicable.
2. For each constituent of concern (COC), select the appropriate GWPS designation and definition to demonstrate that the compliance monitoring program objectives are being achieved either under the Risk Reduction Rules (RRR) pursuant to 30 TAC Chapter 335 or the Texas Risk Reduction Program (TRRP) pursuant to 30 TAC Chapter 350. The RRR and TRRP GWPS designations and definitions may not be combined pursuant to 30 TAC Section 350.2(m). Delete all designations and definitions that are not applicable.

   ACL = alternative concentration limit; PQL = practical quantitation limit; PCL = protective concentration level; RSA = Remedy Standard A; RSB = Remedy Standard B

TRRP GWPS Designation and Definitions

$^{GW}GW_{Ing}$ ACL pursuant to 30 TAC §335.160(b) based upon the PCL determined under RSA or RSB (Residential or Commercial /Industrial) for Class 1 or Class 2 Groundwater ingestion PCL of 30 TAC Chapter 350. The PCL value, Column B, will change as updates to the rule are promulgated. Changes to the rule automatically change the concentration value established in Column B in this table. In accordance with §350.72(b), GWGWIng, PCLs may need to be adjusted to lower concentrations to meet the cumulative carcinogenic risk level (less than or equal to 1x10-4) and hazard index criteria (less than or equal to 10) when there are more than 10 carcinogenic and/or more than 10 non-carcinogenic chemicals of concern within a source medium.

CP Table V: Designation of Wells

Point of Compliance Wells
Unit Name: Ponds WMA (Stormwater Pond and Bauxite Pond)
Well Numbers: Shallow (Zone A): 1587, 1785R, 1885R, 1985, R3-4, R4-1; Deep: (Zone C): 2P86, 3P86, 4P87
Unit Name: Moat WMA
Well Numbers: 1M85R, 3M85, 6M85, 7M85
Point of Exposure Wells
~~Unit Name: Refinery: Site-Wide PMZ~~
~~Well Numbers: R1-10, R2-12, R6-5, R6-6, R6-7~~
~~Unit Name: Refinery: Groundwater Region 7 PMZ~~
~~Well Numbers: OW-4, OW-5, OW-8, R7-5~~
Alternate Point of Exposure Wells
Unit Name: Refinery: Site-Wide PMZ
Well Numbers: R1-10, R2-12, R6-5, R6-6, R6-R7
Unit Name: Refinery: Groundwater Region 7 PMZ
Well Numbers: OW-4, OW-5, OW-8, R7-5
Unit Name: WP: West Property Groundwater PMZ
Well Numbers: MW-18, MW-19, MW-22, MW-24, MW-25
Background Wells
Unit Name: Ponds WMA (Stormwater Pond and Bauxite Pond)
Well Numbers: Shallow (Zone A): 5R, R5-6
Unit Name: Moat WMA
Well Numbers: 2M85
FOA Boundary of Compliance Wells
None

Wells that are not listed in this table, but are required by Permit Section XI.B.2 (e.g. AMP wells, CAO wells, etc.,) and depicted only in CP Attachment A are subject to change, upon approval by the Executive Director, without modification to the Compliance Plan.

CP Table VI: Compliance Period for RCRA-Regulated Units

Moat (NOR 001)	Year or Number of Years
Year Waste Management Activities Initiated	1979
Year Closed	1991
Compliance Period (years)	~~12~~ 30 years
Compliance Period Began	2007
~~Ponds WMA (~~Stormwater Pond ~~and Bauxite Pond)~~	Year or Number of Years
Year Waste Management Activities Initiated	1973
Year Closed	~~1993~~ 1992
Compliance Period (years)	~~20~~ 30 years
Compliance Period Began	1998
Bauxite Pond	Year of Number of Years
Year Waste Management Activities Initiated	1947
Year Closed	1992
Compliance Period (years)	30 years
Compliance Period Began	1998

Revision Date: Oct 3, 2024

CP Table VIII: Compliance Schedule

Item	**Compliance Schedule** (from the date of issuance of the Compliance Plan unless otherwise specified)	**Regulatory Citation**	**Requirement**
A.	60	Compliance Plan	Submit to the Executive Director a schedule summarizing all activities required by the Compliance Plan. The schedule shall list the starting dates of all routine activities. The permittee shall include an updated schedule in the groundwater monitoring report required by Provision XI.G.3. The schedule shall list the activity or report, the Compliance Plan Section which requires the activity or report and the calendar date the activity or report is to be completed or submitted (if this date can be determined.)
B.	60	30 TAC §335.163(4) and Provision XI.F.2.	Submit to the Executive Director for review and approval a Sampling & Analysis Plan (SAP) unless the SAP has been submitted with the application and referenced in Provision I.B.
C.	During the first thirty (30)~~sixty (60)~~ days of each first and third quarter	30 TAC §350.31(g)	Corrective action monitoring shall be conducted on a semiannual basis for any RCRA-regulated units subject to corrective action program, listed in CP Table I.A program.
D.	During the first thirty (30)~~sixty (60)~~ days of each first and third quarter	30 TAC §350.33(k)	Compliance monitoring shall be conducted on a semiannual basis for any RCRA-regulated units subject to corrective action program listed in CP Table I.B.
E.	During the first thirty (30)~~sixty (60)~~ days of each first and third	30 TAC §335.167	For SWMUs and/or AOCs subject to alternative corrective monitoring, corrective action monitoring shall be conducted on a semiannual basis for the solid waste management units (SWMUs) and/or areas of concern (AOC) listed in CP Table I.C.

Item	**Compliance Schedule** (from the date of issuance of the Compliance Plan unless otherwise specified)	**Regulatory Citation**	**Requirement**
	quarter		

Item	**Compliance Schedule** (from the date of issuance of the Compliance Plan unless otherwise specified)	**Regulatory Citation**	**Requirement**
F	During the first thirty (30)~~sixty (60)~~ days of each first and third quarter	30 TAC §335.151	For units subject to alternative corrective action, alternative corrective action shall be conducted on a semiannual basis for those units listed in CP Table I.D.
G.	During the first thirty (30)~~sixty (60)~~ days of each first and third quarter	30 TAC Section 335.156 and Chapter 350	Corrective action monitoring shall be conducted on a semiannual basis for the RCRA Units, solid waste management units (SWMUs) and/or areas of concern (AOC) listed in CP Table I.E. located within the FOA Boundary
H.	120	30 TAC §350.31(g)	If a PMZ has been authorized, submit to the Executive Director proof of compliance with institutional control requirements which provides notice of the existence and location of the Plume Management Zone (PMZ) which prevents exposure to groundwater from this zone until such a time as constituents of concern may be reduced to below the GWPS of CP Table III.
I.	Notify within 30 days	30 TAC §350.33(k)	If a PMZ has been authorized, after an unexpected event occurs, or a condition is detected, during post-response action care period which indicates that additional response actions will be required at an affected property.

[1]Note: Please note that Corrective action monitoring is conducted on semiannual basis unless a less frequent monitoring schedule is approved based on plume stability and achievement of corrective action objectives.

[2]Note: Add other site specific activities listed in the implementation schedule of the application that are not completed at the time of application submittal or issuance of the final draft compliance plan. Otherwise, delete requirement if no additional items necessary}. Some common examples are listed below..*

Example (PMZ-specific items that haven't been completed):

Within sixty (60) days of issuance of the Compliance Plan (or other specified time frame), the Permittee shall submit a schedule for completion of the following activities:

Designation/establishment of Attenuation Monitoring Point (AMP) well locations, AMP-xx, AMP-xx that provides appropriate hydraulically upgradient location within the groundwater protective concentration level exceedance (PLCE) zone and continuing down the approximate central flow path of the constituent of concern (COC in the downgradient extent of (unit/area) in accordance with 30 TAC Section 350.33(f)(4)(D).

Establishment/calculate Attenuation Action Levels (AALs) for AMP, AMP-xx, AMP-xx, in accordance with 30 TAC Section 350.33(f)(4)(D)(ii).

Example (installation of additional monitor wells):

Within sixty (60) days of issuance of the Compliance Plan (or other specified time frame), the Permittee shall submit a schedule for completion of the following activities:

The installation of additional wells MW-xx, MW-xx, POE-xx, etc., as depicting in CP Attachment A-monitor well location map. All newly installed wells must meet the requirements of XI.C and CP Attachment C.

Table XI.E. -General Information

Waste Management Area/Units Description	N.O.R Unit No. (as applicable)	Compliance Period For WMA Year(s) [1] [2]
Moat	001	10
Stormwater Pond	002	19
Bauxite Pond	007	45

1. (The compliance period is the number of years equal to the active life of the waste management area as defined in 30 TAC 335.162).
2. In instances where the compliance period is equal to or exceeds 30 years, the maximum amount of financial assurance required will be based on 30 years because the required post-closure care period to perform corrective action and groundwater monitoring is 30 years. In instances where the compliance period is less than 30 years, the financial assurance for corrective action or compliance monitoring will be based on the longest time frame established by one of the following criteria:
    a. the duration of your compliance plan;
    b. the time frame for clean-up based on model projections and historical data as approved by the Executive Director; or
    c. the compliance period for the unit/area.

Clean Copy Revised Tables

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
Stormwater Pond (Facility Unit 01)	002	Inactive (Interim Closed)	18.4 million gallons	19	1973*
Moat (Facility Unit 02)	001	Closed	17 million gallons	10	1979
Bauxite Pond (Facility Unit 03)	007	Closed	1.8 million gallons	45	1947
Barrel Storage Yard	004	Closed	10,340 gallons	13	1981**

Notes:

* The Stormwater Pond was re-constructed in 1973 to meet indicated capacity. Prior to that time, the area occupied by the unit was used for process and stormwater drainage, dated back to the early years of the refinery (ca. 1919).

** The Barrel Storage Yard was clean-closed under Risk Reduction Standard No. 2 with no further action required.

[1] Indicate only one of the following: Active, Inactive, Closed, or Proposed

[2] Cubic yards, gallons, pounds, gallons/minute, pounds/hour, BTUs/hour, etc.

Table IV.B. - Wastes Managed In Permitted Units

No.	Waste	EPA Hazardous Waste Numbers	TCEQ Waste Form Codes and Classification Codes
1*	Heat Exchanger Bundle Cleaning Sludge	K050	603H
2*	Acid Washwater	D002, D018	102H
3*	Leaded Tank Bottoms	D008, K052	603H
4*	CPI Separator Sludge	F037	503H
5*	Cooling Tower Sludge	Not applicable	5191
6*	Sludge Containing Organics	D018, D026	503H
7*	Slop Oil Emulsion Solids	K049	205H
8*	Drainage and Rinsate from Container Storage Area	D018	102H
9*	Oily Sludges, Heavy	Not applicable	4301
10*	Cooling Tower Sludge	D007	290H
11*	Tank Bottoms, Crude Oil	K169	603H
12*	Oily Sludge Without Phenols	Not applicable	8402
13*	Middle Distillate Tank Bottoms	Not applicable	2901
14*	Storm Surge Pond Sludge	D018, F037	503H
15*	Desalter Oily Water	D002, D003, D018, D028	102H
16*	Tank Water Draws	D002, D003, D018, D028	102H
17	Stormwater	Not applicable	1192

*Wastes managed historically in units that are closed or interim closed and are no longer used to manage hazardous waste.

Table V.D.1. - Surface Impoundments

Permit Unit No.	Surface Impoundment	N.O.R No.	Waste Nos.[1,3]	Rated Capacity	Dimensions	Distance from lowest liner to groundwater	Action Leakage Rate (if required)	Unit will manage Ignitable, Reactive, Incompatible, or F020, F021, F022, F023, F026, and F027 Waste (state all that apply)	Unit Status
1	Stormwater Pond	002	1, 2, 3, 4, 5, 6, 7, 8, 15, 16, 17[3]	18.4 Million Gallons	~700' x 400'	~1'	N/A	No	Active/Interim Closed
2	Moat	001	4, 6, 7, 9, 10, 11, 12, 13, 14, 15	17 Million Gallons	350' x 400'	~6'	N/A	No	Closed as Landfill
3	Bauxite Pond	007	1, 2, 9	1.8 Million Gallons	150'x240'	~1'	N/A	No	Closed as Landfill

1. From Table IV.B, first column
2. Dimensions should be provided as average length, width and depth, also include the surface acreage for the unit.
3. All wastes except Waste Number 17 were historically managed in closed or interim closed units that no longer manage hazardous waste.

Table XI.A.1. - Facility History for Waste Management Units

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Moat*	Surface Impoundment	001	1/1/1979	D002, D003, D007, D018, D026, D028 F037, K049, K050, K169	3.2 acres	Unknown	12/31/1989	1/1/1991	4/9/1991	Yes
Refinery: Stormwater Pond*	Surface Impoundment	002	1/1/1973	D002, D003, D008, D018, D026, D028, F037, K049, K050, K052	4.9 acres	Unknown	prior to May 1990	6/30/1992		Yes
Refinery: Barrel Storage Yard*	Container Storage Area	004	1/1/1981	D001, D008, U077	188 drums	0	1/1/1994	10/6/1994	10/6/1994	No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Bauxite Pond*	Surface Impoundment	007	1/1/1920	D002, D018, K050	0.7 acres	Unknown	12/31/1988	1/1/1990	3/20/1992	Yes
Refinery: Waste Pile Containing Coke at Gate 14	Land Application (SWMU 4)	005	1/1/1978	-	1800 cy	N/A	N/A			No
Refinery: Road Fill	Landspreading Area	008	N/A	-	108,440 cy	N/A	N/A			No
Refinery: Tank	Tank (Aboveground)	009	Unknown	-	18,700 gallons	0	Prior to 1990	1995		No
Refinery: Storage Bin*	Misc. Storage Container	010	1989	D001, D007, D008, D018, D023, D024, D025, F037, K049, K050, K052, K169, K171	450 cy	N/A	N/A			No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Storage Bin	Misc. Storage Container	011	1989	-	15 cy	0	1995			No
Refinery: Storage Bin*	Misc. Storage Container	012	1989	F037	15 cy	0	1995			No
Refinery: Tank 97*	Tank (Aboveground; SWMU 13)	013	Unknown	D001, D003, D018, D028 F037	3,864,000 gallons	N/A	N/A			Yes
Refinery: CPI Separator	Waste Treatment Unit	014	Unknown	D001, D003, D018, D028, F037	N/A	N/A	N/A			No
Refinery: Trap No. 2 Sump	Waste Treatment Unit (SWMU 3)	015	1943	-	N/A	N/A	N/A			No
Refinery: #3 Trap Separator	Waste Treatment Unit	016	Unknown	-	N/A	N/A	N/A			No
Refinery: Storage Bin	Misc. Storage Container	017	1989	-	15 cy	0	1995			No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Storage Bin*	Misc. Storage Container	018	1989	D001, D003, D008, D018, K052, K169, K171	15 cy	0	1995			No
Refinery: Storage Bin*	Misc. Storage Container	019	1992	K050	15 cy	N/A	N/A			No
Refinery: Tank 400*	Tank (Aboveground)	020	1992	D002, D003, D018, D028	3,763,200 gal	N/A	N/A			No
Refinery: Container Storage Area*	Container Storage Area	021	1992	D002, D003, D018, D028	88 drums	N/A	N/A			No
Refinery: Waste Pile	Land Application	022	1995	-	6 cy	0	1995	1995		No
Refinery: Vehicle Maintenance Battery Storage Area*	Container Storage Area	023	Prior to 1993	D002, D008	6 batteries	0	No longer regulated			No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Weathered Tank Bottom Storage Area	Surface Impoundment	024	Prior to 1993	-	11,700 cf	Unknown	Unknown	2001		No
Refinery: Temporary Frac Tank*	Misc. Storage Container	025	Prior to 1993	F037	50 drums	N/A	N/A			No
Refinery: Platinum Catalyst Container Storage Area*	Container Storage Area	026	1995	D018	64 drums	N/A	N/A			No
Refinery: Temporary CBM Tank, Portable*	Container Storage Area	027	1995	D002	6,300 gal	0	1996	1996	N/A	No
Refinery: Temporary CBM Tank, Portable*	Container Storage Area	028	1995	D002	6,300 gal	0	1996	1996	N/A	No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Temporary ARN Tank, Portable	Container Storage Area	029	1995	-	6,300 gal	0	1996	1996	N/A	No
Refinery: Temporary ARN Tank, Portable	Container Storage Area	030	1995	-	6,300 gal	0	1996	1996	N/A	No
Refinery: Tank 51*	Tank (Aboveground)	031	1995	D002, D003, D018, D028	3,383,940 gal	N/A	N/A			No
Refinery: Tank 65*	Tank (Aboveground)	032	1998	D002, D003, D018, D028	80,000 bbls	N/A	N/A			No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Tank Fire Walls (consisting of 33 tanks: 1, 2, 47 (removed), 50, 51, 85, 97, 202, 203, 204, 206, 314 to 317, 319 to 327, 330 (formerly 207), 331, 332, 348, 811, 820, and 824 to 826)	SWMU 1	-	Unknown	-	Unknown	Unknown	Unknown			Yes
Refinery: Buried Cell Near the Bauxite Pond	SWMU 2	-	Unknown	-	Unknown	Unknown	Unknown	2012		No
Refinery: Area Immediately Surrounding the Bauxite Pond	SWMU 5	-	Unknown	-	Unknown	Unknown	Unknown	2012		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Dehydrator Tank Fire Walls	SWMU 6	-	1953	-	15,571 cy	Unknown	1973	2012		No
Refinery: Maintenance Area Ditch	SWMU 7	-	Unknown	-	300 cf	0	Unknown			No
Refinery: Detol Pad	SWMU 8	-	1987	-	47 cy	0	1993			No
Refinery: Sandblast Grit Pile	SWMU 9	-	N/A	-	-	0	N/A	1994		No
Refinery: Tanks 203 and 204*	SWMU 12	-	1940	K170	-	N/A	2019			Yes
RBTF: Tank 830	SWMU 14	-	N/A	N/A	N/A	N/A	N/A			No
Refinery: Tank 307	SWMU 15	-	N/A	N/A	N/A	N/A	N/A			Yes
Refinery: Storm Water System	SWMU 23	-	N/A	N/A	N/A	N/A	N/A			No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Dumpster (Cafeteria, Labs, Offices)	Misc. Container	301	1999	N/A	8 cy	0	Unknown	2010		No
WP: Dumpster (Machine Shops)	Misc. Container	302	1999	N/A	8 cy	0	Unknown	2010		No
WP: Dumpster (Evaporators)	Misc. Container	303	1999	N/A	6 cy	0	Unknown	2010		No
WP: Dumpster (Water Treatment Plant)	Misc. Container	304	1999	N/A	6 cy	0	Unknown	2010		No
WP: Dumpster (Carpenter Shop)	Misc. Container	305	1999	N/A	4 cy	0	Unknown	2010		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Dumpster (Storeroom)	Misc. Container	306	1999	N/A	8 cy	0	Unknown	2010		No
WP: Dumpster (Storeroom)	Misc. Container	307	1999	N/A	8 cy	0	Unknown	2010		No
WP: Dumpster (24 Machine Maint. Shops)	Misc. Container	308	1999	N/A	8 cy	0	Unknown	2010		No
WP: Dumpster (24 Machine)	Misc. Container	309	1999	N/A	6 cy	0	Unknown	2010		No
WP: Dumpster (Contractor Hill Dumpster)	Misc. Container	310	1999	N/A	8 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (24 Machine)	Misc. Container	311	1999	N/A	30 cy	0	Unknown	2010		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Roll-off Dumpster (24 Machine)	Misc. Container	312	1999	N/A	30 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (24 Machine)	Misc. Container	313	1999	N/A	30 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (24 Machine)	Misc. Container	314	1999	N/A	40 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (Mobile Shop)	Misc. Container	315	1999	N/A	30 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (Mobile Shop)	Misc. Container	316	1999	N/A	30 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (Truck Staging Area)	Misc. Container	317	1999	N/A	30 cy	0	Unknown	2010		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Roll-off Dumpster (Storeroom Dumpster)	Misc. Container	318	1999	N/A	30 cy	0	Unknown	2010		No
WP: Salvage Yard Piles	Waste Pile (SWMU 16)	319	1999	N/A	-	0				Yes
WP: Waste Piles near Paint Shop	Waste Pile (SWMU 20)	320	1999	N/A	-	0	Unknown			Yes
WP: Container Storage Area	Container Storage Area	321	1999	N/A	-	0	Unknown	2010		No
WP: Container Storage Area*	Container Storage Area	322	1999	D001, D002, D018, D039, D040, F003, F005	-	0	Unknown	2010		No
WP: Enclosed Dumpsters for Asbestos Waste	Misc. Container	323	1999	N/A	40 cy	0	Unknown	2010		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Storage Area for Asbestos Containing Materials	Container Storage Area (SWMU 18)	324	1999	N/A	-	0	Unknown			No
WP: Safety-Kleen Parts Washer (Pump Shop)	Tank	325	1999	D001, D018, D039, D040	30 gal	0	Unknown	2010		No
WP: Safety-Kleen Parts Washer (Mobile Shop)	Tank	326	1999	D001, D018, D039, D040	30 gal	0	Unknown	2010		No
WP: Safety-Kleen Parts Washer (Mobile Shop)	Tank	327	1999	D001, D018, D039, D040	30 gal	0	Unknown	2010		No
WP: Landfill	Landfill	401	Unknown	-	-	-	-	Pre-2015	Pre-2015	No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Storage Area for Asbestos Containing Material	Container Storage Area (SWMU 18)	402	N/A	N/A	N/A	N/A	N/A	2015		No
WP: Container Storage Area (General Storeroom)*	Container Storage Area	403	Unknown	D001, D002, D003, F003, F005	Unknown	0	Unknown	2010		No
WP: Misc. Storage Container	Misc. Storage Container	404	Unknown	N/A	40 cy	0	Unknown	2008		No
WP: Misc. Storage Container*	Misc. Storage Container	405	Unknown	D001, D018, D039, D040	40 cy	0	Unknown	2010		No
WP: Trash Dumpsters	Misc. Storage Container	406	Unknown	N/A	Unknown	0	Unknown	2010		No
WP: Dumpster – Recaust Tank Bottoms	Misc. Storage Container	408	Unknown	N/A	Unknown	0	Unknown	2008		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Dumpster – Recaust Tank Bottoms*	Misc. Storage Container	409	Unknown	D002, D003	Unknown	0	Unknown	2010		No
WP: Misc. Storage Container*	Misc. Storage Container	410	Unknown	D001, D018, D039, D040	30 gal	0	Unknown	2010		No
WP: Misc. Storage Container*	Misc. Storage Container	411	Unknown	D001, D018, D039, D040	30 gal	0	Unknown	2010		Yes
WP: Misc. Storage Container	Misc. Storage Container	412	Unknown	D001, D018, D039, D040	30 gal	0	Unknown	2010		No
WP: Mill Wide Process Waste Water Collection System*	Neutralization only	413	Unknown	D002, D003	-	N/A	N/A	N/A		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Paint Storage Room*	Container Storage Area (SWMU 22)	414	Unknown	D001, F003, F005	-	0	Unknown	2010		Yes
WP: Container Storage Area	Container Storage Area	415	Unknown	N/A	-	0	Unknown	2010		No
WP: Misc. Storage Container	Misc. Storage Container	416	Unknown	N/A	40 cy	0	Unknown	2008		No
WP: Incinerator	Incinerator (SWMU 19)	417	Unknown	N/A	-	0	Unknown			Yes
WP: Wood Waste Pile and Dumpsters	Container Storage Area	418	Unknown	N/A	-	0	2006	2008		No
WP: Dumpsters (Paper Machine)	Misc. Storage Container	419	Unknown	N/A	-	0	Unknown	2008		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Dumpsters (Mobile Shop)	Misc. Storage Container	420	Unknown	N/A	-	0	Unknown	2008		No
WP: Dumpsters (Salvage Yard)	Misc. Storage Container	421	Unknown	N/A	-	0	Unknown	2008		No
WP: Dumpsters (Cafeteria & General Office)	Misc. Storage Container	422	Unknown	N/A	-	0	Unknown	2008		No
WP: Turnaround /Outage Dumpsters	Misc. Storage Container	423	Unknown	N/A	-	0	Unknown	2008		No
WP: Salvage Yard Piles	Misc. Storage Container (SWMU 16)	424	Unknown	N/A	-	0	Unknown			Yes
WP: Dumpsters (Paint Shop)	Misc. Container	425	Unknown	N/A	-	0	Unknown	2008		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Waste Piles Near Paint Shop	Waste Pile (SWMU 20)	426	Unknown	N/A	-	0	Unknown			Yes
WP: Abandoned Cooling Tower Basin	Waste Pile (SWMU 17)	427	N/A	N/A	N/A	0	N/A			No
WP: Main Sewer Dump Station	Discharge to Sewer/POTW or NPDES	428	Unknown	N/A	-	0	Unknown	2010		No
WP: Maintenance Shop Dumpsters	Misc. Container	429	Unknown	N/A	-	0	Unknown	2008		No
WP: Storeroom Dumpsters	Misc. Container	430	Unknown	N/A	-	0	Unknown	2008		No
Areas of Concern (AOCs)										
Refinery: Groundwater Region 7	AOC 10	-	N/A	N/A	N/A	N/A	N/A			Yes

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Groundwater Regions 1, 2, 3, 4, 5, and 6	AOC 11	-	N/A	N/A	N/A	N/A	N/A			Yes
WP: West Property Groundwater PMZ	AOC 21	-	N/A	N/A	N/A	N/A	N/A			Yes
RBTF: Historical Tank Footprint	AOC 24	-	N/A	N/A	N/A	N/A	N/A			Unknown
RBTF: Abovegroun d Piping	AOC 25	-	N/A	N/A	N/A	N/A	N/A			Yes
RBTF: Former Truck Loading Terminal	AOC 26	-	N/A	N/A	N/A	N/A	N/A			Unknown
RBTF: City of Pasadena Laydown Storage Yard	AOC 27	-	N/A	N/A	N/A	N/A	N/A			Unknown

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Aboveground Tanks and Surface Conveyance Feature	AOC 28	-	N/A	N/A	N/A	N/A	N/A			Unknown
WP: Former Roof Shingle Production Area	AOC 29	-	N/A	N/A	N/A	N/A	N/A			Unknown
SP: Fuel Storage Tanks	AOC 30	-	N/A	N/A	N/A	N/A	N/A			Unknown
SP: Former Concrete Batch Plant Equipment	AOC 31	-	N/A	N/A	N/A	N/A	N/A			Unknown
SP: Former Pond 1	AOC 32	-	N/A	N/A	N/A	N/A	N/A			Unknown
SP: Former Pond 2	AOC 33	-	N/A	N/A	N/A	N/A	N/A			Unknown

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
SP: Former Pond 3	AOC 34	-	N/A	N/A	N/A	N/A	N/A			Unknown
SP: Equipment Washdown Pad and Sump	AOC 35	-	N/A	N/A	N/A	N/A	N/A			Unknown

1 Indicate by asterisk (*) those waste management units that have received any hazardous waste constituent listed in Appendix VIII of 40 CFR Part 261.
2 For the purposes of this Compliance Plan Application, a waste management unit receiving hazardous waste after July 26, 1982 shall be considered a Regulated Unit. A waste management unit that ceased receiving hazardous waste on or before that date shall be considered a Solid Waste Management Unit (SWMU).
3 Date the applicant submitted certification of closure to the Commission.
4 Hazardous constituents are those hazardous constituents listed in Appendix IX of 40 CFR Part 264.

CP Table I - Waste Management Units and Areas Subject to Groundwater Corrective Action and Compliance Monitoring

A. Corrective Action[1] (30 TAC Section 335.166)

Unit Name	Notice of Registration (NOR) Number, if applicable	Date Program Requirement and Remedy Standard Completed[4]

B. Compliance Monitoring[1] (30 TAC Section 335.165)

Unit Name	Notice of Registration (NOR) Number, if applicable	Date Program Requirement and Remedy Standard Completed[4]
Moat	001	

C. Corrective Action[2] (30 TAC Section 335.167)

Unit Name	Notice of Registration (NOR) Number, if applicable	Date Program Requirement and Remedy Standard Completed[4]
Refinery: Groundwater Region 7 PMZ	N/A	
WP: West Property Groundwater PMZ	320/414/417/426	

D. Alternative Corrective Action[3] (30 TAC Section 335.151)

Unit Name	Notice of Registration (NOR) Number, if applicable	Date Program Requirement and Remedy Standard Completed[4]
Refinery: Site-Wide PMZ (Groundwater Regions 1, 2, 3, 4, 5, and 6)	N/A	
Ponds Waste Management Area	Stormwater Pond (002); Bauxite Pond (007)	

E. Facility Operations Area (FOA)[4] (30 TAC Section 335.156 and Chapter 350)

RESERVED

Foot Note:

1. Program applies to RCRA-regulated units only.
2. Program applies to releases from solid waste management units (SWMUs) and/or areas of concern (AOCs).
3. Program applies to commingled releases from RCRA-regulated unit and from one or more SWMUs and/or AOCs.
4. List SWMUs, additional units/areas of Investigation, AOCs, RCRA-regulated units within the FOA that are subject to corrective action. For RCRA units, SWMUs and/ or AOC outside the FOA boundary for which compliance monitoring and/ or corrective action applies should be listed separately in Items A, B or C as appropriate.

5. For the purpose of maintaining a historical record to verify the units/areas have met the program requirements in accordance with Permit Provisions XI.A.2, XI.A.3., XI.A.4. and/or XI.A.5., the permittee shall update CP Table I to reflect the new status of the unit/area to include the remedy standard achieved for all media of concern and the date of the Commission's No Further Action (NFA) approval letter. The units/area shall not be deleted from CP Table I until the program objectives have been completed and no further action has been approved through modification or amendment to the Permit.

CP Table II: Solid Waste Management Units and/or Areas of Concern Addressed in Permit Section XI.H. for which Corrective Action Applies Pursuant to 30 TAC Section 335.167

Unit Name	NOR Number, if applicable	SWMU or AOC	Affected Media[1]	Date Program Requirement and Remedy Standard Completed
Refinery: Tank Fire Walls (consisting of 33 tanks: 1, 2, 47 (removed), 50, 51, 85, 97, 202, 203, 204, 206, 314 to 317, 319 to 327, 330 (formerly 207), 331, 332, 348, 811, 820, and 824 to 826)		SWMU 1	GW and Soil	
Refinery: Buried Cell Near the Bauxite Pond		SWMU 2	Soil	NFA approved 09/07/2006; Risk Reduction Rule Standard 3 (RRR3)
Refinery: Trap No. 2 Sump	015	SWMU 3	Soil	NFA approved 09/07/2006; RRR3
Refinery: Waste Pile Containing Coke at Gate 14	005	SWMU 4	Soil	NFA approved 09/07/2006; RRR3
Refinery: Area Immediately Surrounding the Bauxite Pond		SWMU 5	Soil	NFA approved 09/07/2006; RRR3
Refinery: Dehydrator Tank Fire Walls		SWMU 6	Soil	
Refinery: Maintenance Area Ditch		SWMU 7	Soil	
Refinery: Detol Pad		SWMU 8	Soil	
Refinery: Sandblast Grit Pile		SWMU 9	Soil	NFA approved 09/07/2006; RRR3
Refinery: Groundwater Region 7 PMZ		AOC 10	GW	
Refinery: Site-Wide PMZ (Groundwater Regions 1, 2, 3, 4, 5, and 6)		AOC 11	GW	
Refinery: Tanks 203 and 204		SWMU 12	GW and soil	

Refinery: Tank 97	013	SWMU 13	GW and soil	
RBTF: Tank 830		SWMU 14	Pending	
Refinery: Tank 307		SWMU 15	Pending	
WP: Salvage Yard Piles	319/424	SWMU 16	Soil	
WP: Abandoned Cooling Tower Basin	427	SWMU 17	Pending	
WP: Storage Area for Asbestos Containing Materials	324/402	SWMU 18	Soil	
WP: Incinerator	417	SWMU 19	GW and Soil	
WP: Waste Piles Near Paint Shop	320/426	SWMU 20	GW and Soil	
WP: West Property Groundwater PMZ	320/414/417/426	AOC 21	GW	
WP: Paint Storage Room	414	SWMU 22	GW and Soil	
RBTF: Storm Water System		SWMU 23	Pending	
RBTF: Historical Tank Footprint		AOC 24	Pending	
RBTF: Aboveground Piping		AOC 25	Pending	
RBTF: Former Truck Loading Terminal		AOC 26	Pending	
RBTF: City of Pasadena Laydown Storage Yard		AOC 27	Pending	
WP: Aboveground Tanks and Surface Conveyance Feature		AOC 28	Pending	
WP: Former Roof Shingle Production Area		AOC 29	Pending	
SP: Fuel Storage Tanks		AOC 30	Pending	
SP: Former Concrete Batch Plant Equipment		AOC 31	Pending	
SP: Former Pond 1		AOC 32	Pending	
SP: Former Pond 2		AOC 33	Pending	
SP: Former Pond 3		AOC 34	Pending	
SP: Equipment Washdown Pad and Sump		AOC 35	Pending	

Refinery = SWMU or AOC located on Main Refinery

RBTF = SWMU or AOC located on Red Bluff Tank Farm

WP = SWMU or AOC located on West Property

SP = SWMU or AOC located on South Property

SWMU= Solid Waste Management Unit

AOC= Area of Concern

Foot Note:

1. Specify the affected media [i.e. soil, groundwater (GW), surface water (SW), sediment (SED)].
2. For each SWMU or AOC, specify the Remedy Standard that was completed and the date of the Commission's No Further Action (NFA) letter for the media of concern.
3. For sites with FOA authorization, list the SWMUs and/or AOCs that are subject to corrective action at the site. Please separate the SWMUs and/or AOCs that are located within the FOA boundary from the SWMUs and/or AOCs that are located outside of the FOA boundary.

Note:

CP Table II lists SWMUs and/or AOCs which have been identified in the RCRA Facility Assessment (RFA) Report as having a release(s) or a potential release(s) of hazardous waste, hazardous constituents, or other constituents of concern. The permittee is thus required to meet Corrective Action Objectives for the SWMUs and/or AOCs in accordance with Permit Section XI.H. and 30 TAC Section 335.167.

The permittee shall update CP Table II when a new SWMU and/or AOC that requires corrective action is identified. The permittee shall also update CP Table II as outlined in Footnote 2 when the corrective action status of a media for a SWMU or AOC has changed.

SWMUs and/or AOCs shall not be deleted from this table when the Corrective Action Objectives have been completed and a No Further Action (NFA) determination has been approved for the SWMU and/or AOC. In accordance with Permit Section XI.H., CP Table II is intended to be a historical record of the facility's corrective actions and to reflect when the Corrective Action Objectives have been met for each SWMU/AOC.

There may be cases in which the permittee fulfills the Corrective Action Objectives for soils at a SWMU/AOC, but long-term groundwater monitoring and corrective action may be necessary to meet the groundwater Corrective Action Objectives. In such instances, the SWMU/AOC would be listed in CP Table I, Item C, and would be subject to all applicable provisions of this Compliance Plan. If a release from a SWMU/AOC is commingled with a RCRA-regulated unit, then the unit and the SWMU/AOC would be listed in CP Table I, Item D. In accordance with Permit Section XI.H., once the Corrective Action Objectives for groundwater are completed, the permittee shall modify or amend the Compliance Plan to reassign the SWMU/AOC in CP Table I, Item C or Item D, to CP Table II. CP Table II should reflect the new status of the SWMU/AOC. It should include the Remedy Standard achieved for all media of concern and the date of the Commission's NFA approval letter for each SWMU/AOC.

Permittee: Pasadena Refining System, Inc.

CP Table III: Corrective Action Program Table of Detected Hazardous and Solid Waste Constituents and the Groundwater Protection Standard

Unit Name	**Column A** Hazardous Constituents	**Column B** Groundwater Protection Standards (mg/l) at the POC[2]		**Column C** Groundwater Protection Standards (mg/l) at the POE or APOE, or FBOC[1,2]	
Ponds WMA	Benzene	0.588	^{SW}GW		N/A
	o-Cresol	60	^{SW}GW		N/A
	m- and p-Cresol	60	^{SW}GW		N/A
	2,4-Dimethylphenol	9.41	^{SW}GW		N/A
	Ethylbenzene	29.3	^{SW}GW		N/A
	2-Methylnaphthalene	3.53	^{SW}GW		N/A
	Naphthalene	14.7	^{SW}GW		N/A
	Phenol	324	^{SW}GW		N/A
	Toluene	56.5	^{SW}GW		N/A
	Xylenes	100	^{SW}GW		N/A
	1,2-Dichloroethane	11.6	^{SW}GW		N/A
	Chloroethane	9.8	^{GW}GW $_{ING}$		N/A
	Vinyl Chloride	0.002	^{GW}GW $_{ING}$		N/A
	Benzo(a) pyrene	0.01	^{SW}GW		N/A
	Chrysene	0.01	^{SW}GW		N/A
	Lead	0.624	^{SW}GW		N/A
	Chromium	5.84	^{SW}GW		N/A
Refinery: Site-Wide PMZ (Groundwater Regions 1, 2, 3, 4, 5, & 6)	Benzene	0.588	^{SW}GW	0.588	^{SW}GW
	Benzo(a)anthracene	0.01	^{SW}GW	0.01	^{SW}GW
	Bis(2-ethylhexyl)phthalate	2.59	^{SW}GW	2.59	^{SW}GW
	1,2-Dichloroethane	4.30	^{SW}GW	4.30	^{SW}GW
	Ethylbenzene	29.3	^{SW}GW	29.3	^{SW}GW
	Methyl t-butyl ether (MTBE)	28.2	^{SW}GW	28.2	^{SW}GW
	2-Methylnaphthalene	3.53	^{SW}GW	3.53	^{SW}GW
	Naphthalene	14.7	^{SW}GW	14.7	^{SW}GW
	Toluene	56.5	^{SW}GW	56.5	^{SW}GW
	Xylenes	100	^{SW}GW	100	^{SW}GW

Permittee: Pasadena Refining System, Inc.

Unit Name	**Column A** Hazardous Constituents	**Column B** Groundwater Protection Standards (mg/l) at the POC[2]		**Column C** Groundwater Protection Standards (mg/l) at the POE or APOE, or FBOC[1,2]	
	Arsenic	0.165	^{SW}GW	0.165	^{SW}GW
	Chromium	5.84	^{SW}GW	5.84	^{SW}GW
	Lead	0.624	^{SW}GW	0.624	^{SW}GW
	Vanadium	10.6	^{SW}GW	10.6	^{SW}GW
Refinery: Groundwater Region 7 PMZ	Benzene	0.005	$^{GW}GW_{ING}$	0.005	$^{GW}GW_{ING}$
	Benzo(a)anthracene	0.0091	$^{GW}GW_{ING}$	0.0091	$^{GW}GW_{ING}$
	o-Cresol	1.2	$^{GW}GW_{ING}$	1.2	$^{GW}GW_{ING}$
	m- and p-Cresol	0.12	$^{GW}GW_{ING}$	0.12	$^{GW}GW_{ING}$
	1,2-Dichloroethane	0.005	$^{GW}GW_{ING}$	0.005	$^{GW}GW_{ING}$
	Diethylphthalate	20	$^{GW}GW_{ING}$	20	$^{GW}GW_{ING}$
	2,4-Dimethylphenol	0.49	$^{GW}GW_{ING}$	0.49	$^{GW}GW_{ING}$
	Ethylbenzene	0.7	$^{GW}GW_{ING}$	0.7	$^{GW}GW_{ING}$
	Methyl Ethyl Ketone (2-Butanone)	15	$^{GW}GW_{ING}$	15	$^{GW}GW_{ING}$
	2-Methylnaphthalene	0.098	$^{GW}GW_{ING}$	0.098	$^{GW}GW_{ING}$
	Naphthalene	0.49	$^{GW}GW_{ING}$	0.49	$^{GW}GW_{ING}$
	Toluene	1	$^{GW}GW_{ING}$	1	$^{GW}GW_{ING}$
	Xylenes	10	$^{GW}GW_{ING}$	10	$^{GW}GW_{ING}$
	Arsenic	0.01	$^{GW}GW_{ING}$	0.01	$^{GW}GW_{ING}$
	Barium	2	$^{GW}GW_{ING}$	2	$^{GW}GW_{ING}$
	Chromium	0.1	$^{GW}GW_{ING}$	0.1	$^{GW}GW_{ING}$
	Lead	0.015	$^{GW}GW_{ING}$	0.015	$^{GW}GW_{ING}$
	Nickel	0.49	$^{GW}GW_{ING}$	0.49	$^{GW}GW_{ING}$
	Vanadium	0.044	$^{GW}GW_{ING}$	0.044	$^{GW}GW_{ING}$
	Zinc	7.3	$^{GW}GW_{ING}$	7.3	$^{GW}GW_{ING}$
WP: West Property Groundwater PMZ	Benzene	0.005	$^{GW}GW_{ING}$	0.005	$^{GW}GW_{ING}$
	Pentachlorophenol	0.001	$^{GW}GW_{ING}$	0.001	$^{GW}GW_{ING}$
	Tetrachloroethene	0.005	$^{GW}GW_{ING}$	0.005	$^{GW}GW_{ING}$
	Trichloroethene	0.005	$^{GW}GW_{ING}$	0.005	$^{GW}GW_{ING}$
	1,1-Dichloroethene	0.007	$^{GW}GW_{ING}$	0.007	$^{GW}GW_{ING}$

Permittee: Pasadena Refining System, Inc.

Unit Name	**Column A** Hazardous Constituents	**Column B** Groundwater Protection Standards (mg/l) at the POC[2]		**Column C** Groundwater Protection Standards (mg/l) at the POE or APOE, or FBOC[1,2]	
	cis-1,2-Dichloroethene	0.07	$^{GW}GW_{ING}$	0.07	$^{GW}GW_{ING}$
	trans-1,2-Dichloroethene	0.1	$^{GW}GW_{ING}$	0.1	$^{GW}GW_{ING}$
	Vinyl Chloride	0.002	$^{GW}GW_{ING}$	0.002	$^{GW}GW_{ING}$
	Dioxin/Furan (as 2,3,7,8-TCDDD toxicity equivalent quotients)	3×10^{-8} TEQ	$^{GW}GW_{ING}$	3×10^{-8} TEQ	$^{GW}GW_{ING}$
	Arsenic	0.01	$^{GW}GW_{ING}$	0.01	$^{GW}GW_{ING}$
	Polychlorinated Biphenyls	0.0005	$^{GW}GW_{ING}$	0.0005	$^{GW}GW_{ING}$
	Lead	0.015	$^{GW}GW_{ING}$	0.015	$^{GW}GW_{ING}$

Notes:

a) If the Corrective Action Program (Provision XI.E.) does not apply to the RCRA-regulated units, SWMUs, or AOCs at the facility, mark "Reserved" next to the CP Table III heading.

b) CP Table III represents the long list of hazardous constituents that are reasonably expected to be in, or derived from, the waste placed in each RCRA-regulated unit, SWMU, and/or AOC listed in the table. CP Table III also lists the hazardous constituents that have been historically detected in the groundwater for each RCRA-regulated unit, SWMU, and/or AOC. These hazardous constituents are monitored in accordance with Provision XI.F.3.c.(1).

c) In accordance with Provision XI.D.6., the Groundwater Protection Standards (GWPS) must be met before the RCRA-regulated unit, SWMU, and/or AOC can exit the Corrective Action Program.

d) If applicable, "Appendix IX" can be used in Column A for a unit instead of listing each chemical of concern (COC). The permittee may petition the Executive Director for the deletion of a specific COC from the Appendix IX analysis if the permittee can demonstrate that the COC was never used in the facility's operations nor was disposed of in the waste management area.

e) Attenuation monitoring point (AMP) wells, corrective action system (CAS) wells, and corrective action observation (CAO) wells should not be listed in CP Table III. These wells should only be depicted in the CP Attachment A maps. Once an AMP, CAS, or CAO well meets its respective attenuation action levels (AALs) or GWPS, then the Permittee may propose to discontinue monitoring that well without modification to the Permit. If the AMP, CAS, or CAO well is listed in CP Table III, then any proposed change to the well would require modification to the Permit. Changes to the wells depicted in the CP Attachment A maps can be approved in the Groundwater Monitoring Report required by CP Table VII and become a part of the Permit by reference.

Footnotes:

1. Use Column C to specify the GWPS assigned at a POE or APOE (i.e. for sites with MNA or PMZ proposals as applicable under TRRP), or FBOC for those sites with FOA authorization. Put "N/A" if a specific program or column item is not applicable.
2. For each COC, select the appropriate GWPS designation and definition to demonstrate that the corrective action program objectives are being achieved either under the Risk Reduction Rules (RRR) pursuant to 30 TAC Chapter 335 or the Texas Risk Reduction Program (TRRP) pursuant to 30 TAC Chapter 350. The RRR and TRRP GWPS designations and definitions may not be combined pursuant to 30 TAC Section 350.2(m).

Permittee: Pasadena Refining System, Inc.

TRRP GWPS Designations and Definitions

$^{GW}GW_{Ing}$	ACL pursuant to 30 TAC §335.160(b) based upon the PCL determined under RSA or RSB (Residential or Commercial /Industrial) for Class 1 or Class 2 Groundwater ingestion PCL of 30 TAC Chapter 350. The PCL value, Column B, will change as updates to the rule are promulgated. Changes to the rule automatically change the concentration value established in Column B in this table.. In accordance with §350.72(b), GWGWIng, PCLs may need to be adjusted to lower concentrations to meet the cumulative carcinogenic risk level (less than or equal to 1x10-4) and hazard index criteria (less than or equal to 10) when there are more than 10 carcinogenic and/or more than 10 non-carcinogenic chemicals of concern within a source medium.
MCL	ACL pursuant to 30 TAC §335.160(b) based upon the Protective PCL determined under RSA or RSB for Groundwater- to-surface water PCL of 30 TAC Chapter 350. The PCL value, Column B, will change as updates to the rule are promulgated. Changes to the rule automatically change the concentration value established in Column B in this table.

CP Table IIIA: Corrective Action Program Table of Indicator Parameters and the Groundwater Protection Standard

Unit Name	**Column A** Hazardous Constituents	**Column B** Groundwater Protection Standards (mg/l) at POC[2]		**Column C** Groundwater Protection Standards (mg/l) at the POE or APOE, or FBOC[1,2]	
Ponds WM Area	Benzene	0.588	^{SW} GW		N/A
	2-Methylnaphthalene	3.53	^{SW} GW		N/A
	Naphthalene	14.7	^{SW} GW		N/A
Refinery: Site-Wide PMZ (Groundwater Regions 1, 2, 3, 4, 5, and 6)	Benzene	0.588	^{SW} GW	0.588	^{SW} GW
	Benzo(a)anthracene	0.01	^{SW} GW	0.01	^{SW} GW
	Methyl-t-butyl ether (MTBE)	28.2	^{SW} GW	28.2	^{SW} GW
	2-Methylnaphthalene	3.53	^{SW} GW	3.53	^{SW} GW
	Naphthalene	14.7	^{SW} GW	14.7	^{SW} GW
	Toluene	56.5	^{SW} GW	56.5	^{SW} GW
	Lead	0.624	^{SW} GW	0.624	^{SW} GW
Refinery: Groundwater Region 7 PMZ	Benzene	0.005	^{GW} GW $_{ING}$	0.005	^{GW} GW $_{ING}$
	Benzo(a)anthracene	0.0091	^{GW} GW $_{ING}$	0.0091	^{GW} GW $_{ING}$
	m- and p-Cresol	0.12	^{GW} GW $_{ING}$	0.12	^{GW} GW $_{ING}$ING
	1, 2-Dichloroethane	0.005	^{GW} GW $_{ING}$	0.005	^{GW} GW $_{ING}$ING
	Toluene	1	^{GW} GW $_{ING}$	1	^{GW} GW $_{ING}$ING
	Arsenic	0.01	^{GW} GW $_{ING}$	0.01	^{GW} GW $_{ING}$ING
	Chromium	0.1	^{GW} GW $_{ING}$	0.1	^{GW} GW $_{ING}$ING
	Lead	0.015	^{GW} GW $_{ING}$	0.015	^{GW} GW $_{ING}$ING
	Vanadium	0.044	^{GW} GW $_{ING}$	0.044	^{GW} GW $_{ING}$
WP: West Property Groundwater PMZ	Arsenic	0.01	^{GW} GW $_{ING}$	0.01	^{GW} GW $_{ING}$
	Benzene	0.005	^{GW} GW $_{ING}$	0.005	^{GW} GW $_{ING}$ING
	Pentachlorophenol	0.001	^{GW} GW $_{ING}$	0.001	^{GW} GW $_{ING}$ING
	Tetrachloroethene	0.005	^{GW} GW $_{ING}$	0.005	^{GW} GW $_{NG}$
	Trichloroethene	0.005	^{GW} GW $_{ING}$	0.005	^{GW} GW $_{ING}$
	Vinyl Chloride	0.002	^{GW} GW $_{ING}$	0.002	^{GW} GW $_{ING}$

Notes:

a) If the Corrective Action Program (Provision XI.E.) does not apply to the RCRA-regulated units, SWMUs, or AOCs at the facility, mark "Reserved" next to the CP Table III heading.

b) CP Table III represents the long list of hazardous constituents that are reasonably expected to be in, or derived from, the waste placed in each RCRA-regulated unit, SWMU, and/or AOC listed in the table. CP Table III also lists the hazardous constituents that have been historically detected in the groundwater for each RCRA-regulated unit, SWMU, and/or AOC. These hazardous constituents are monitored in accordance with Provision XI.F.3.c.(1).

c) In accordance with Provision XI.D.6., the Groundwater Protection Standards (GWPS) must be met before the RCRA-regulated unit, SWMU, and/or AOC can exit the Corrective Action Program.

d) If applicable, "Appendix IX" can be used in Column A for a unit instead of listing each chemical of concern (COC). The permittee may petition the Executive Director for the deletion of a specific COC from the Appendix IX analysis if the permittee can demonstrate that the COC was never used in the facility's operations nor was disposed of in the waste management area.

e) Attenuation monitoring point (AMP) wells, corrective action system (CAS) wells, and corrective action observation (CAO) wells should not be listed in CP Table III. These wells should only be depicted in the CP Attachment A maps. Once an AMP, CAS, or CAO well meets its respective attenuation action levels (AALs) or GWPS, then the Permittee may propose to discontinue monitoring that well without modification to the Permit. If the AMP, CAS, or CAO well is listed in CP Table III, then any proposed change to the well would require modification to the Permit. Changes to the wells depicted in the CP Attachment A maps can be approved in the Groundwater Monitoring Report required by CP Table VII and become a part of the Permit by reference.

Footnotes:

1. Use Column C to specify the GWPS assigned at a POE or APOE (i.e. for sites with MNA or PMZ proposals as applicable under TRRP), or FBOC for those sites with FOA authorization.

   Put "N/A" if a specific program or column item is not applicable.

2. For each COC, select the appropriate GWPS designation and definition to demonstrate that the corrective action program objectives are being achieved either under the Risk Reduction Rules (RRR) pursuant to 30 TAC Chapter 335 or the Texas Risk Reduction Program (TRRP) pursuant to 30 TAC Chapter 350. The RRR and TRRP GWPS designations and definitions may not be combined pursuant to 30 TAC Section 350.2(m).

   ACL = alternative concentration limit; PQL = practical quantitation limit; PCL = protective concentration level; RSA = Remedy Standard A; RSB = Remedy Standard B

CP Table IV: Compliance Monitoring Program Table of Hazardous and Solid Waste Constituents and Quantitation Limits

Unit Name	**Column A** Hazardous Constituents[2]	**Column B** Concentration Limits (mg/l)[1]	
Moat	Chromium	ND (0.01)	ND
	Lead	ND (0.01)	ND
	Benzene	ND (0.001)	ND
	Ethylbenzene	ND (0.001)	ND
	1,1,1-Trichloroethane	ND (0.005)	ND
	Xylenes	ND (0.001)	ND
	o-Cresol	ND (0.000571)	ND
	m- and p-Cresols	ND (0.000571)	ND
	Naphthalene	ND (0.000571)	ND
	Phenol	ND (0.00114)	ND
	Benzo(a)pyrene	ND (0.000286)	ND
	Chrysene	ND (0.000571)	ND
	1,2-Dichloroethane	ND (0.001)	ND
	1,1-Dichloroethene	ND (0.001)	ND
	Chloroethane	ND (0.01)	ND
	Ethane	ND (0.005)	ND
	Vinyl Chloride	ND (0.002)	ND
	Barium	ND (0.01)	ND
	Toluene	ND (0.001)	ND

Notes:

a) If there are no RCRA-regulated units subject to the Compliance Monitoring Program , mark “Reserved” next to the CP Table IV heading.

b) CP Table IV represents the long list of hazardous constituents that are reasonably expected to be in, or derived from, waste placed in a RCRA-regulated unit, but may not be detected in groundwater above the constituents' respective quantitation limits.

c) CP Table IV constituents are to be monitored annually in accordance with Provision XI.F.3.(2). Any CP Table IV constituents detected in the groundwater should be carried over to CP Table IVA.

Footnotes:

1) For each constituent of concern, select the appropriate quantitation limit designation and definition according to either the Risk Reduction Rules (RRR) pursuant to 30 TAC

Chapter 335 or the Texas Risk Reduction Program (TRRP) pursuant to 30 TAC Chapter 350.

2) If applicable, "Appendix IX" can be used in Column A for a unit instead of listing each chemical of concern (COC). The permittee may petition the Executive Director for the deletion of a specific COC from the Appendix IX analysis if the permittee can demonstrate that the COC was never used in the facility's operations nor was disposed of in the waste management area.

TRRP Quantitation Limit Designations and Definitions

BKG Background as determined in accordance with 30 TAC 350.4(a)(6).

ND Non-detectable at MQL as determined by the analytical methods of the EPA SW-846 most recent edition, and as listed in the July 8, 1987 edition of the Federal Register and later editions. MQL is indicated in parentheses. MQL is defined in 30 TAC §350.4 (54) as the lowest non-zero concentration standard in the laboratory's initial calibration curve and is based on the final volume of extract (or sample) used by the laboratory.

CP Table IVA: Compliance Monitoring Program Table of Detected Hazardous Constituents and the Groundwater Protection Standard

Unit Name	**Column A** Hazardous Constituents	**Column B** Concentration Limits (mg/l)	
Moat	Barium	2	$^{GW}GW_{Ing}$
	Toluene	1	$^{GW}GW_{Ing}$

Notes:

a) If there are no RCRA-regulated units subject to the Compliance Monitoring Program (Provision ?), mark "Reserved" next to the CP Table IVA heading.

b) CP Table IVA represents the short list of hazardous constituents detected in groundwater above the quantitation limits specified in CP Table IV.

c) CP Table IVA constituents are monitored semiannually in accordance with Provision XI.F.3.c.(2) to verify that the groundwater protection standards (GWPS) are being met.

Footnotes:

1. Use Column C, specify the GWPS assigned at a POE or APOE (i.e. as applicable under TRRP). (i.e. modify Table and Footnotes to support the establishment of GWPS at POC, POE or APOE monitoring points, as appropriate). Put "N/A" if a specific program or column item is not applicable.
2. For each constituent of concern (COC), select the appropriate GWPS designation and definition to demonstrate that the compliance monitoring program objectives are being achieved either under the Risk Reduction Rules (RRR) pursuant to 30 TAC Chapter 335 or the Texas Risk Reduction Program (TRRP) pursuant to 30 TAC Chapter 350. The RRR and TRRP GWPS designations and definitions may not be combined pursuant to 30 TAC Section 350.2(m). Delete all designations and definitions that are not applicable.

   ACL = alternative concentration limit; PQL = practical quantitation limit; PCL = protective concentration level; RSA = Remedy Standard A; RSB = Remedy Standard B

TRRP GWPS Designation and Definitions

$^{GW}GW_{Ing}$ ACL pursuant to 30 TAC §335.160(b) based upon the PCL determined under RSA or RSB (Residential or Commercial /Industrial) for Class 1 or Class 2 Groundwater ingestion PCL of 30 TAC Chapter 350. The PCL value, Column B, will change as updates to the rule are promulgated. Changes to the rule automatically change the concentration value established in Column B in this table. In accordance with §350.72(b), GWGWIng, PCLs may need to be adjusted to lower concentrations to meet the cumulative carcinogenic risk level (less than or equal to 1x10-4) and hazard index criteria (less than or equal to 10) when there are more than 10 carcinogenic and/or more than 10 non-carcinogenic chemicals of concern within a source medium.

CP Table V: Designation of Wells

Point of Compliance Wells
Unit Name: Ponds WMA (Stormwater Pond and Bauxite Pond)
Well Numbers: Shallow (Zone A): 1587, 1785R, 1885R, 1985, R3-4, R4-1; Deep: (Zone C): 2P86, 3P86, 4P87
Unit Name: Moat WMA
Well Numbers: 1M85R, 3M85, 6M85, 7M85
Point of Exposure Wells
Alternate Point of Exposure Wells
Unit Name: Refinery: Site-Wide PMZ
Well Numbers: R1-10, R2-12, R6-5, R6-6, R6-R7
Unit Name: Refinery: Groundwater Region 7 PMZ
Well Numbers: OW-4, OW-5, OW-8, R7-5
Unit Name: WP: West Property Groundwater PMZ
Well Numbers: MW-18, MW-19, MW-22, MW-24, MW-25
Background Wells
Unit Name: Ponds WMA (Stormwater Pond and Bauxite Pond)
Well Numbers: Shallow (Zone A): 5R, R5-6
Unit Name: Moat WMA
Well Numbers: 2M85
FOA Boundary of Compliance Wells
None

Wells that are not listed in this table, but are required by Permit Section XI.B.2 (e.g. AMP wells, CAO wells, etc.,) and depicted only in CP Attachment A are subject to change, upon approval by the Executive Director, without modification to the Compliance Plan.

CP Table VI: Compliance Period for RCRA-Regulated Units

Moat (NOR 001)	Year or Number of Years
Year Waste Management Activities Initiated	1979
Year Closed	1991
Compliance Period (years)	30 years
Compliance Period Began	2007
Stormwater Pond	Year or Number of Years
Year Waste Management Activities Initiated	1973
Year Closed	1992
Compliance Period (years)	30 years
Compliance Period Began	1998
Bauxite Pond	Year of Number of Years
Year Waste Management Activities Initiated	1947
Year Closed	1992
Compliance Period (years)	30 years
Compliance Period Began	1998

CP Table VIII: Compliance Schedule

Item	**Compliance Schedule** (from the date of issuance of the Compliance Plan unless otherwise specified)	**Regulatory Citation**	**Requirement**
A.	60	Compliance Plan	Submit to the Executive Director a schedule summarizing all activities required by the Compliance Plan. The schedule shall list the starting dates of all routine activities. The permittee shall include an updated schedule in the groundwater monitoring report required by Provision XI.G.3. The schedule shall list the activity or report, the Compliance Plan Section which requires the activity or report and the calendar date the activity or report is to be completed or submitted (if this date can be determined.)
B.	60	30 TAC §335.163(4) and Provision XI.F.2.	Submit to the Executive Director for review and approval a Sampling & Analysis Plan (SAP) unless the SAP has been submitted with the application and referenced in Provision I.B.
C.	During the first thirty (30) days of each first and third quarter	30 TAC §350.31(g)	Corrective action monitoring shall be conducted on a semiannual basis for any RCRA-regulated units subject to corrective action program, listed in CP Table I.A program.
D.	During the first thirty (30) days of each first and third quarter	30 TAC §350.33(k)	Compliance monitoring shall be conducted on a semiannual basis for any RCRA-regulated units subject to corrective action program listed in CP Table I.B.
E.	During the first thirty (30) days of each first and third quarter	30 TAC §335.167	For SWMUs and/or AOCs subject to alternative corrective monitoring, corrective action monitoring shall be conducted on a semiannual basis for the solid waste management units (SWMUs) and/or areas of concern (AOC) listed in CP Table I.C.

Item	**Compliance Schedule** (from the date of issuance of the Compliance Plan unless otherwise specified)	**Regulatory Citation**	**Requirement**
F	During the first thirty (30) days of each first and third quarter	30 TAC §335.151	For units subject to alternative corrective action, alternative corrective action shall be conducted on a semiannual basis for those units listed in CP Table I.D.
G.	During the first thirty (30) days of each first and third quarter	30 TAC Section 335.156 and Chapter 350	Corrective action monitoring shall be conducted on a semiannual basis for the RCRA Units, solid waste management units (SWMUs) and/or areas of concern (AOC) listed in CP Table I.E. located within the FOA Boundary
H.	120	30 TAC §350.31(g)	If a PMZ has been authorized, submit to the Executive Director proof of compliance with institutional control requirements which provides notice of the existence and location of the Plume Management Zone (PMZ) which prevents exposure to groundwater from this zone until such a time as constituents of concern may be reduced to below the GWPS of CP Table III.
I.	Notify within 30 days	30 TAC §350.33(k)	If a PMZ has been authorized, after an unexpected event occurs, or a condition is detected, during post-response action care period which indicates that additional response actions will be required at an affected property.

[1]Note: Please note that Corrective action monitoring is conducted on semiannual basis unless a less frequent monitoring schedule is approved based on plume stability and achievement of corrective action objectives.

[2]Note: Add other site specific activities listed in the implementation schedule of the application that are not completed at the time of application submittal or issuance of the final draft compliance plan. Otherwise, delete requirement if no additional items necessary}. Some common examples are listed below..*

Example (PMZ-specific items that haven't been completed):

Within sixty (60) days of issuance of the Compliance Plan (or other specified time frame), the Permittee shall submit a schedule for completion of the following activities:

Designation/establishment of Attenuation Monitoring Point (AMP) well locations, AMP-xx, AMP-xx that provides appropriate hydraulically upgradient location within the groundwater protective concentration level exceedance (PLCE) zone and continuing down the approximate central flow path of the constituent of concern (COC in the downgradient extent of (unit/area) in accordance with 30 TAC Section 350.33(f)(4)(D).

Establishment/calculate Attenuation Action Levels (AALs) for AMP, AMP-xx, AMP-xx, in accordance with 30 TAC Section 350.33(f)(4)(D)(ii).

Example (installation of additional monitor wells):

Within sixty (60) days of issuance of the Compliance Plan (or other specified time frame), the Permittee shall submit a schedule for completion of the following activities:

The installation of additional wells MW-xx, MW-xx, POE-xx, etc., as depicting in CP Attachment A-monitor well location map. All newly installed wells must meet the requirements of XI.C and CP Attachment C.

Table XI.E. -General Information

Waste Management Area/Units Description	N.O.R Unit No. (as applicable)	Compliance Period For WMA Year(s) [1] [2]
Moat	001	10
Stormwater Pond	002	19
Bauxite Pond	007	45

1. (The compliance period is the number of years equal to the active life of the waste management area as defined in 30 TAC 335.162).
2. In instances where the compliance period is equal to or exceeds 30 years, the maximum amount of financial assurance required will be based on 30 years because the required post-closure care period to perform corrective action and groundwater monitoring is 30 years. In instances where the compliance period is less than 30 years, the financial assurance for corrective action or compliance monitoring will be based on the longest time frame established by one of the following criteria:
    a. the duration of your compliance plan;
    b. the time frame for clean-up based on model projections and historical data as approved by the Executive Director; or
    c. the compliance period for the unit/area.

Attachment D
Historical Aerial Photographs

INQUIRY #: 7904568.8

YEAR: 1938

= 750'

N

EDR

INQUIRY #: 7904568.8

YEAR: 1944

= 750'

N

EDR

INQUIRY #: 7904568.8

YEAR: 1953

= 750'

N

EDR

INQUIRY #: 7904568.8

YEAR: 1966

= 750'

N

EDR

INQUIRY #: 7904568.8

YEAR: 1973

= 750'

N

EDR

Attachment E
Text Revisions

Redline Text Revisions

Texas Commission on Environmental Quality
Permit Application for Industrial and Hazardous Waste Storage/Processing/Disposal Facility with Compliance Plan

Part B Application

The TCEQ is committed to accessibility. You may request an accessible version of these documents, by contacting the Industrial and Hazardous Waste permits section program at (512)-239-2335 or by email at ihwper@tceq.texas.gov.

Disclaimer:

This document is intended for use in the RCRA Part B application preparation and review process. Please use the knowledge about the facility's operational design and history to ensure that a complete application based on 40 Code of Federal Regulations Part 270 and 30 Texas Administrative Code (TAC) Chapter 305 and Chapter 335 is submitted. If regulatory requirements change during the application process, the TCEQ may request additional information before a permit is issued.

Texas Commission on Environmental Quality
Permit Application for Industrial and Hazardous Waste Storage/Processing/Disposal Facility with Compliance Plan

Part B Application

Form Availability:

This form, along with other Industrial and Hazardous Waste documents, is available online at: https://www.tceq.texas.gov/permitting/waste_permits/ihw_permits/ihw_permit_forms.html. The number for this form is 00376. Questions may be e-mailed to ihwper@tceq.texas.gov.

Introduction:

This permit application is generally a reorganized summary of the Part B information requirements of 40 CFR Part 270 and 30 Texas Administrative Code (TAC) Chapter 305 Subchapters C and D and Chapter 335. The TCEQ may request additional information before a permit is issued, if regulatory requirements change.

The original application plus copies for New, Renewals, Major Amendments and Class 3 Modifications should be submitted to:

Texas Commission on Environmental Quality
Attention: Waste Permits Division, MC 126
P.O. Box 13087
Austin, Texas 78711-3087

The original application plus copies for Class 1, Class 1[1], Class 2 Modifications and Minor Amendments should be submitted to:

Texas Commission on Environmental Quality
Attention: Industrial and Hazardous Waste Permits Section, MC 130
Waste Permits Division
P.O. Box 13087
Austin, Texas 78711-3087

Telephone Inquiries:

(512) 239 -2335 (For RCRA permit application) - Industrial & Hazardous Waste Permits Section, Waste Permits Division

(512) 239-6412 (For industrial and hazardous waste classification) - Technical Analysis Team, Industrial & Hazardous Waste Permits Section, Waste Permits Division

(512) 239-6413 (For solid waste registration number, EPA identification number, and notice of registration) - Registration and Reporting Section, Occupational Licensing and Registration Division

(512) 239-0272 (For non-combustion units) - Chemical New Source Review Permits

Section, Air Permits Division

(512) 239-1583 (For combustion units) - Energy/Combustion New Sources Review Permits Section, Air Permits Division

(512) 239-0600 (For legal) - Environmental Law Division

(512) 239-6150 (For financial assurance) - Financial Assurance Unit, Revenue Operations Section, Financial Administration Division

(512) 239-0300 (For payment of permit application fees) - Cashier's Office, Revenue Operations Section, Financial Administration Division

(512) 239-2201 (For compliance plan or corrective action) - Voluntary Cleanup Program/Corrective Action Section, Remediation Division

Application Review Prohibition:

The Texas Commission on Environmental Quality (TCEQ) shall not review an application for a new commercial hazardous waste facility, and the application shall be deemed not to have been received, until the emergency response information required by Section III.F. of the application has been reviewed and declared by TCEQ staff to be complete and satisfactory. [30 TAC 281.26, 30 TAC 305.50(a)(12)(C) and (D)]

Permit Issuance Prohibited [30 TAC 335.205]:

The TCEQ shall not issue a permit for:

1. a new hazardous waste management facility or an areal expansion of an existing facility if the facility or expansion does not meet the requirements of 30 TAC 335.204 (relating to Unsuitable Site Characteristics);
2. a new hazardous waste landfill or the areal expansion of an existing hazardous waste landfill if there is a practical, economic, and feasible alternative to such a landfill that is reasonably available to manage the types and classes of hazardous waste which might be disposed of at the landfill;
3. a new commercial hazardous waste management facility as defined in 30 TAC 335.202 (relating to Definitions) or the subsequent areal expansion of such a facility or unit of that facility if the owner/operator proposes to locate the boundary of the unit within 0.5 of a mile (2,640 feet) of an established residence, church, school, day care center, surface water body used for a public drinking water supply, or dedicated public park;
4. a new commercial hazardous waste management facility that is proposed to be located at a distance greater than 0.5 mile (2,640 feet) from an established residence, church, school, day care center, surface water body used for a public drinking water supply, or dedicated public park unless the applicant demonstrates to the satisfaction of the commission that the facility will be operated so as to safeguard public health and welfare and protect physical property and the environment, at any distance beyond the facility's property boundaries;
5. a proposed hazardous waste management facility, or a capacity expansion of an existing hazardous waste management facility if a fault exists within 3,000 feet of the proposed hazardous waste management facility or of the capacity expansion of an existing hazardous waste management facility unless the applicant performs the demonstration found in 30 TAC 305.50(a)(4)(D) and 305.50(a)(10)(E) ; and

6. A proposed solid waste facility for the processing or disposal of municipal hazardous waste or industrial solid waste which is located within an area of a municipality or county in which the processing or disposal of municipal hazardous waste or industrial solid waste is prohibited by an ordinance or order. [Texas Health and Safety Code Section 363.112]

See 30 TAC 335 Subchapter G: Location Standards for Hazardous Waste Storage, Processing, or Disposal for additional details and information regarding items 1 through 5 above.

Completing The Application and Electronic Checklist:

Prior to submitting a new permit application, please contact the TCEQ Registration and Reporting Section to obtain a Solid Waste Registration Number and an EPA Identification Number for inclusion in Section I.A. of this application. The facility's Solid Waste Registration Number may be proposed in Section I.A. as the Permit Number

This permit application form has been designed to solicit specific information, with reports to be attached or inserted. A response must be made for each informational request in the application form. If an item is not applicable please state "not applicable" and explain. All information included in the application must be listed by the format of the application. For example, if an engineering report is attached to the application to fulfill the requirements of Section V, then each subsection of the engineering report must correlate with the corresponding subsection in the application form (e.g., Subsection V.A.3. of the report would be proposed construction schedules). If information is provided which does not correspond with the application form, the specific rule or regulation which requires submittal of the information must be cited. Each report should be attached behind the summary form or table for the report and submitted as one document with the pages sequentially numbered at the bottom. Maps, bluelines, and drawings that cannot be folded to 8-1/2" x 11" may be submitted as separate documents. Engineering plans and specifications submitted with an application must be approved and sealed by a licensed Professional Engineer, with current license and designating the Registered Engineering Firm's name and Registration Number as required by the Texas Engineering Practice Act. Geology reports, geologic maps, and geologic cross-sections submitted with an application must be approved and sealed by a licensed Professional Geologist, with current license required by the Texas Geoscience Practice Act. Complete the tables in this application rather than substituting.

Facilities which will receive industrial and hazardous wastes from off-site sources must also provide information on these wastes and associated waste management units in accordance with 30 TAC 335.2.

In addition, the electronic checklist has been designed to facilitate the application preparation and review process, and should be completed and submitted along with applicable applications (see “Submittal” below).

For those who pre-filed a Part A application, certain items may have been omitted. These omissions must be addressed at this time. Additionally, if hazardous waste management methods have changed since the filing of the Part A, please provide an updated Part A.

Pursuant to Section 361.067 of the Texas Health and Safety Code, the TCEQ is required to mail a copy of this application or a summary of its contents to other regulatory agencies. Section I may be considered a summary of the entire application provided that all questions are completely answered. Therefore, Section I responses must not rely solely on cross-references to other sections of the application.

Groundwater Contamination:

If groundwater monitoring has detected the presence of hazardous constituents in the facility groundwater, the owner or operator must submit a Compliance Plan Application that is included as Section XI of this application. For more detailed instructions concerning a Compliance Plan, please see Section XI.

Submittal:

The complete application should be prepared using PDF and word processing. The third copy in the submittal package should consist of paper copies or PDF files of all surveys, reports, plot plans, diagrams, P&IDs, maps, etc., and a Compact Disk (CD) or USB drive of the completed application form document and tables included in this application attachments. Files may be compressed using PKZIP Ver. 2 or a 100% compatible program. For Renewal, Amendment, and Modification applications, the PDF files should include both a finalized version and, where available, a redline/strikeout version clearly identifying all proposed changes from the existing permit. For revised application sections and incorporated documents where redline/ strikeout versions are not available, submit a detailed listing of all proposed changes to the existing permit. In addition, the submitted electronic version of the application should be easily searchable during the review process by TCEQ staff. If your application is larger than 25 MB, you can submit your application via TCEQ's file transfer protocol server (FTPS) to ihwper@tceq.texas.gov. For instructions on using the agency's FTPS, please visit the **TCEQ FTPS website**.

Electronic Versions of the Application:

TCEQ will publish electronic copies of the application and associated documents online. Applicants must provide copy of the administratively complete application and technically complete application. The electronic copy provided would be the current, complete version with revisions and replacements made throughout the document and without redline/strikeout text. TCEQ will also publish electronic versions of NOD responses online.

For a new permit application or renewal, submit:

1. an original updated Part A permit application plus three (3) full copies;
2. the original Part B application plus three (3) full copies (including the electronic third copy);
3. a proof of payment receipt from **TCEQ ePAY,** or check for payment of permit application fees transmitted directly to the TCEQ Financial Administration Division;
4. pre-printed mailing labels of the adjacent landowners or an electronic mailing list on USB drive or Compact Disk (CD) in MS Word format; and
5. Completed RCRA Part B Administrative and Technical Evaluation Electronic Checklist (Form #00136) on CD, DVD, or USB drive.

For a new compliance plan or renewal of an existing compliance plan, please submit the following in addition to the above:

1. Sections I and XI.A. through XI.E., as applicable;
2. Tables XI.A.I., XI.E.1 through XI.E.III, and CP Tables I, II, V, VI through IX, are required; and CP Tables IIIA, IIIA, IV and IVA as applicable. (The applicant should use the MS Word formatted Tables provided in the Part B application to include site-specific information that will become part of the final draft permit. Table should be converted to PDF format before submitting your application); and

1. a Sampling and Analysis Plan (SAP) compliant with "Attachment A" requirements and evaluation of monitoring wells compliant with "Attachment B" well specification requirements.

For a post-closure care permit submit:

4. an original updated Part A permit application plus three (3) full copies;
5. the original Part B application (excluding Sections III B and F; IV A, C and D; VII A and B; VIII.B and C; and X) plus three (3) full copies;
6. a proof of payment receipt from TCEQ ePAY, or a check for payment of permit application fees transmitted directly to the TCEQ Financial Administration Division;
7. pre-printed mailing labels of the adjacent landowners or an electronic mailing list on USB drive or Compact Disk (CD) in MS Word format; and
8. Completed RCRA Part B Administrative and Technical Evaluation Electronic Checklist (Form #00136) on CD, DVD, or USB drive.

For major amendments to an issued hazardous waste permit, submit:

1. (if appropriate) an original updated Part A permit application plus three (3) full copies;
2. an original Part B application plus three (3) full copies, consisting of, at a minimum, Section I - Table I of the Part B plus replacement pages for the changed portions of the application that change as a result of the amendment;
3. an explanation of why the major amendment is needed;
4. a proof of payment receipt from TCEQ ePAY, or a check for payment of permit application fees transmitted directly to the TCEQ Financial Administration Division;
5. pre-printed mailing labels of the adjacent landowners or an electronic mailing list on USB drive or Compact Disk (CD) in MS Word format; and
6. Completed RCRA Part B Administrative and Technical Evaluation Electronic Checklist (Form #00136) on CD, DVD, or USB drive.

For minor amendments to an issued hazardous waste permit, submit:

1. (if appropriate) an original updated Part A permit application plus three (3) full copies;
2. an original Part B application plus three (3) full copies, consisting of, at a minimum, Section I-Table I of the Part B plus replacement pages for the changed portions of the application that change as a result of the amendment;
3. an explanation of why the minor amendment is needed;
4. a proof of payment receipt from TCEQ ePAY, or a check for payment of permit application fees transmitted directly to the TCEQ Financial Administration Division;
5. pre-printed mailing labels of the adjacent landowners or an electronic mailing list on USB drive or Compact Disk (CD) in MS Word format

For Class 3 modifications (including adding or revising a Compliance Plan) to an issued hazardous waste permit, submit:

1. (if appropriate) an original updated Part A permit application plus three (3) full copies;
2. an original Part B application plus three (3) full copies, consisting of, at a minimum, Section I - Table I of the Part B plus replacement pages for the changed portions of the application that change as a result of the modification;
3. a description of the exact changes to be made to the permit conditions and supporting documents referenced by the permit;
4. an explanation of why the Class 3 modification is needed;
5. evidence of the public notice mailing and publication (after the public meeting, please submit a statement that the public meeting was held within the required timeframes);

   a. Evidence of public notice mailing to Adjacent Landowners requires submittal of copies of mail.
6. a proof of payment receipt from TCEQ ePAY, or a check for payment of permit application fees transmitted directly to the TCEQ Financial Administration Division;
7. pre-printed mailing labels of the adjacent landowners or an electronic mailing list on USB drive or Compact Disk (CD) in MS Word format; and
8. Completed RCRA Part B Administrative and Technical Evaluation Electronic Checklist (Form #00136) on CD, DVD, or USB drive.

For Class 2 modifications to an issued hazardous waste permit, submit:

1. an original Class 2 Modification Form (TCEQ-20903) plus an electronic copy along with the required documents listed in the form;

For Class 1[1] modifications to an issued hazardous waste permit, submit:

1. an original Class 1ED Modification Form (TCEQ-20903) plus an electronic copy along with the required documents listed in the form;

For Class 1 modifications to an issued hazardous waste permit, submit:

1. an original Class 1 Modification Form (TCEQ-20903) plus an electronic copy along with the required documents listed in the form;

If several modifications are submitted as one application, the application review will proceed at rate of the amendment or modification which has the longest timeframe.

Application Revisions:

Please submit any application revisions with a revised date and page numbers at the bottom of the page(s).

Waivers:

Any request for waiver of any of the applicable requirements of this permit application must be fully documented.

Designation of Material as Confidential:

The designation of material as confidential is frequently carried to excess. The Commission has a responsibility to provide a copy of each application to other review agencies and to interested persons upon request and to safeguard confidential material from becoming public knowledge. Thus, the Commission requests that the applicant (1) be prudent in the designation of material as confidential and (2) submit such material only when it might be essential to the staff in their development of a recommendation.

The Commission suggests that the applicant not submit confidential information as part of the permit application. However, if this cannot be avoided, the confidential information should be described in non-confidential terms throughout the application, cross-referenced to Section XIII: Confidential Material, and submitted as a separate Section XIII document or binder, and conspicuously marked "CONFIDENTIAL."

Reasons of confidentiality include the concept of trade secrecy and other related legal concepts which give a business the right to preserve confidentiality of business information to obtain or retain advantages from its right in the information. This includes authorizations under, 18 U.S.C. 1905 and special rules cited in 40 CFR Chapter I, Part 2, Subpart B. Section 361.037 of the Texas Health and Safety Code does not allow an applicant for an industrial solid waste permit to claim as confidential any record pertaining to the characteristics of the industrial solid waste.

The applicant may elect to withdraw any confidential material submitted with the application. However, the permit cannot be issued, amended, or modified if the application is incomplete.

Exposure Assessment:

In accordance with 30 TAC 305.50(a)(8) and 40 CFR 270.10(j), any Part B application submitted for a facility that stores, processes, or disposes of hazardous waste in a surface impoundment or a landfill (including post-closure) must be accompanied by exposure information of the potential for the public to be exposed to hazardous wastes or hazardous constituents through releases related to the unit. This exposure information is considered separate from the permit application, as stated in 40 CFR 270.10(c).

Pre-Application Meeting/Public Participation Activities [30 TAC 335.391 and 30 TAC 39.503]:

a. Applicant-held pre-application public meeting

In accordance with 30 TAC 335.503(b) and 40 CFR Part 124.31(b)-(d), an applicant-held pre-application public meeting is required for the following application types prior to submitting the application to allow the applicant and the public to identify potential issues:

- New applications;
- Renewal applications with Class 3 Permit Modifications or Major Amendments; and
- Major Amendment applications.

The pre-application public meeting is not required for an application submitted for the sole purpose of conducting post-closure activities or post-closure activities and corrective action at a facility unless:

- The application is also for an initial permit for hazardous waste management unit(s); or
- The application is also for renewal of the permit, where the renewal application is proposing a significant change (Class 3 Permit Modification or Major Amendment) in facility operations (Note: per preamble to the related federal rule, the facility operations referenced herein exclude post-closure and corrective action activities).

b. Pre-application meeting with TCEQ

Applicants are strongly encouraged to request a pre-application meeting with TCEQ Permits Section staff and to notify the Industrial and Hazardous Waste Permits Section, Waste Permits Division of intent to file new, renewal, Class 3 permit modification, major amendment, and other complex permit applications.

c. Pre-application local review

In accordance with 30 TAC 335.391, for a new hazardous waste management facility, if a local review committee has been established to facilitate communication between the applicant and the local host community, the applicant should summarize the activities of the committee and submit this summary with the application. Any report completed by a review committee must be submitted.

New industrial or hazardous waste facility that would accept municipal solid waste:

a. If an applicant proposes a new industrial or hazardous waste facility that would accept municipal solid waste, the applicant shall hold a public meeting in the county in which the facility is proposed to be located. This meeting must be held before the 45th day after the date the application is filed. In addition, the applicant shall publish notice of the public meeting in accordance with 30 TAC 39.503(e)(5).

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.

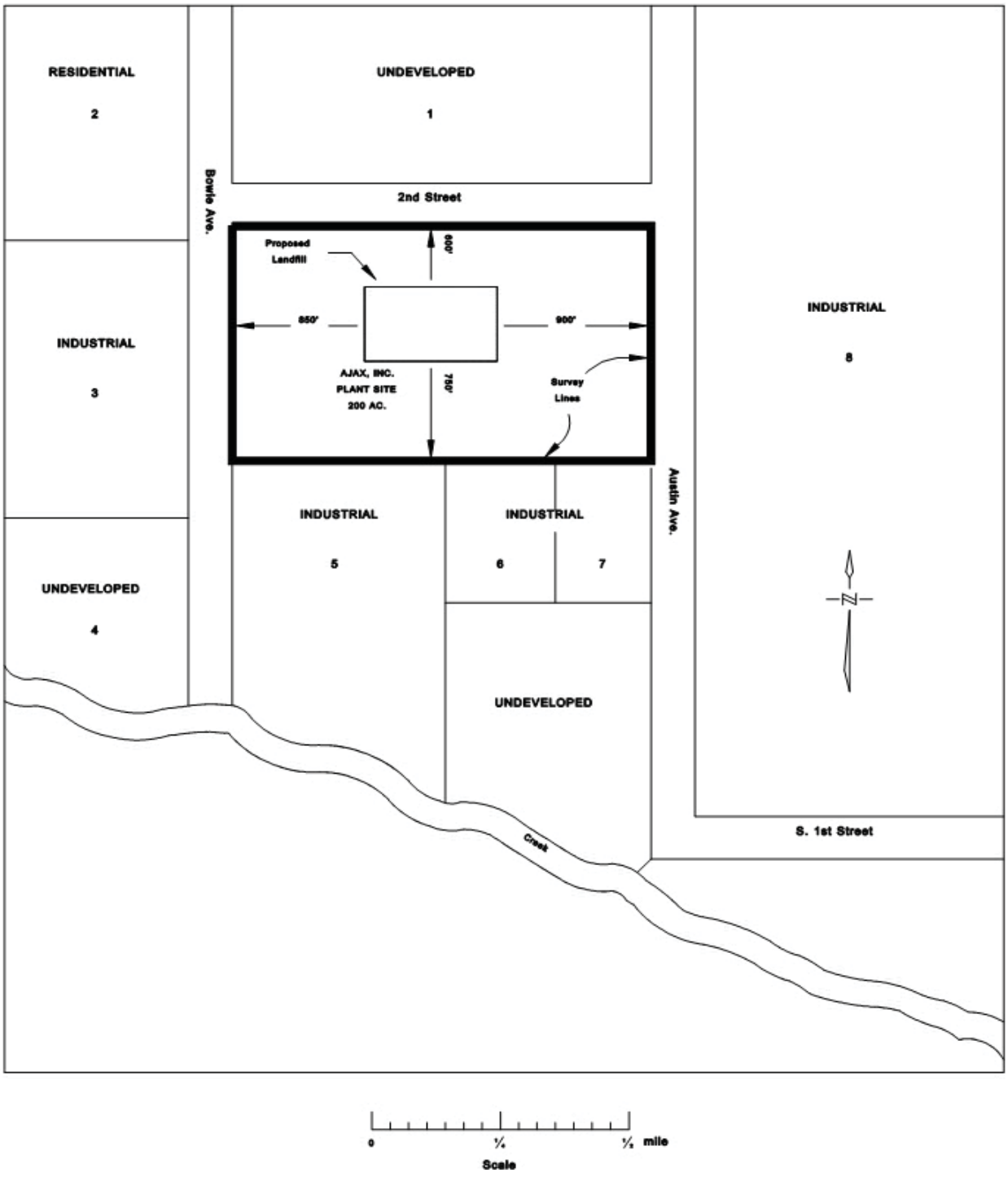
If it is determined that a bilingual notice is required, the applicant is responsible for ensuring that the publication in the alternate language is complete and accurate in that language. Electronic versions of the Spanish template examples are available from the TCEQ to help the applicant complete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

Complete and submit the Bilingual notice confirmation for this application. The Bilingual notice confirmation can be downloaded from the Navigation Pane.

Landowners Cross-Referenced To Application Map

SAMPLE APPLICATION MAP

ALL ADJACENT LANDOWNERS SHALL BE IDENTIFIED



The persons identified below would be considered as affected persons.

1. MR & MRS SAMUEL L TEXANS
11901 STARTLE BLVD
ATOWN TX 78759

2. MR & MRS EDWARD CITIZENS
1405 LINEAR ROAD
LITTLE TOWN TX 76710

3. TEXAS LINKED CORP
8411 NNW HWY
BIG PLACE TX 77590

4. MR & MRS TED GOLDEN MUSTARD
3210 AVENUE BLVD
FISHINSPOT TX 76724

5. GENERIC BREWING CO
4240 KNIGHTS BRIDGE
OUTBACK TX 77640

6. PLAIN COMPANY
6647 CRAIGMOUT LANE
BIG PLACE TX 77590

7. ABC CHEMICALS INC
1212 ZIP STREET
BROADBANKS TX 77640

8. BIG LOCAL BOTTLE CO
10024 LOCAL BLVD
URSINUS TX 79402

Adjacent Landowners List

Submit a map indicating the boundaries of all adjacent parcels of land, and a list (see samples in the instructions) of the names and mailing addresses of all adjacent landowners and other nearby landowners who might consider themselves affected by the activities described by this application. Cross-reference this list to the map through the use of appropriate keying techniques. The map should be a USGS map, a city or county plat, or another map, sketch, or drawing with a scale adequate enough to show the cross-referenced affected landowners. The list should be updated prior to any required public notice. It is the applicant's responsibility to ensure that the list is up-to-date for any required public notice. For all applications (with the exception of Class 1 and Class 1^1 modifications) this mailing list should be submitted on:

1. a Compact Disk (CD) or a USB Drive using software compatible with MS Word [30 TAC 39.5(b)]; or

2. four sets of printed labels.

If the adjacent landowners list is submitted on a compact disk (CD), please label the disk with the applicant's name and permit number. Within the file stored on the disk, type the permit number and applicant's name on the top line before typing the addresses. Names and addresses must be typed in the format indicated below. This is the format required by the U.S. Postal Service for machine readability. Each letter in the name and address must be capitalized, contain no punctuation, and the appropriate two-character abbreviation must be used for the state. Each entity listed must be blocked and spaced consecutively as shown below. The list is to be 30 names, addresses, etc. (10 per column) per page (MS WORD Avery Standard 5160 - ADDRESS template).

Example:

HEAVY METALS LP
PO BOX 85624
PUMPKIN PARK TX 79998-5624

MR AND MRS W R NEIGHBOURLY
1405 ACROSSTHE WAY
GREATER METRO CITY TX 79199

A list submitted on compact disk (CD) should be the only item on that disk. Please do not submit a list on a disk that includes maps or other materials submitted with your application.

If you wish to provide the list on printed labels, please use sheets of labels that have 30 labels to a page (10 labels per column) (for example: Avery® Easy Peel® White Address Labels for Laser Printers 5160). Please provide four complete sets of labels of the adjacent landowners list.

Plain Language Summary and Public Involvement Plan (PIP)

Complete the following form(s) as applicable, 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].

Plain Language Summary Form - English

Plain Language Summary Form - Instructions

Plain Language Summary Form - Spanish

Public Involvement Plan (Form TCEQ-20960)

Instructions for PIP TCEQ-20960

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Instructions:
Open the File Attachments List in the Navigation Page to view all tables and attachments. (Or, click here to open List of Attachments Navigation Pane). Word versions of the Compliance Plan tables are included in the Attachment Tab, not PDF versions. Links below will only open the PDF versions of the tables. Select the applicable tables for your application and complete.

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Table XII.B. - Hazardous Waste Permit Application Fee Worksheet

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CP Table I - Waste Management Units and Areas Subject to Groundwater Corrective Action and Compliance Monitoring
CP Table II - Solid Waste Management Units and/or Areas of Concern for which Corrective Action applies pursuant to 30 TAC 335.167
CP Table III - Corrective Action Program Table of Detected Hazardous and Solid Waste Constituents and the Groundwater Protection Standard
CP Table IIIA - Corrective Action Program Table of Indicator Parameters and Groundwater Protection Standard
CP Table IV - Compliance Monitoring Program Table of Hazardous and Solid Waste Constituents and Quantitation Limits
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Appendices List - NOTE: Provide all Part B responsive information, (e.g. engineering reports, attachments, drawings, tables, maps, etc.) in an Appendix for each section of the application. When preparing the physical format review the Format of Hazardous Waste permit Application and Instructions.
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Appendix III - Facility Management
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Appendix X - Air Emission Standards
Appendix XI- Compliance Plan
Appendix XII - Hazardous Waste Permit Application Fee Tables
Appendix XIII - Confidential Information

Texas Commission on Environmental Quality
Industrial & Hazardous Waste Part B Permit Application

I. General Information

Provide all Part B responsive information in Appendix I. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

Provide responsive information in Appendix I.

a. Complete Table I - General Information **See Appendix I**

b. For all incoming New, Renewal, Class 3 Permit Modification, and Major Amendment applications, the TCEQ requires that a Core Data Form (CDF) be submitted whether or not a change has occurred in the previously submitted form.
For Minor Amendment, Class 1, Class 1[1] , and Class 2 Permit Modification applications, the TCEQ requires that the CDF be only submitted if a change in any information in the previously submitted form has occurred at the time of the application submittal.
For more information regarding the Core Data Form, call (512) 239 1575 or go to the TCEQ Web site at https://www.tceq.texas.gov/permitting/central_registry/guidance.html

See Appendix I

c. **Signature on Application**
It is the duty of the operator to submit an application for a permit. The person who signs the application form will often be the operator himself; when another person signs on behalf of the applicant, his title or relationship to the applicant will be shown. In all cases, the person signing the form must be authorized to do so by the applicant. An application submitted by a corporation must be signed by a responsible corporate officer such as a president, secretary, treasurer, vice president, or by his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the activity described in the form originates. In the case of a partnership or a sole proprietorship, the application must be signed by a general partner or the proprietor, respectively. In the case of a municipal, state, federal, or other public facility, the application must be signed by a principal executive officer, a ranking elected official, or another duly authorized employee. A person signing an application on behalf of an applicant must provide notarized proof of authorization.

d. Complete Interim Status Land Disposal Unit(s) Certification, as applicable **Not Applicable**

e. Submit List and Map of Adjacent Landowners List, as applicable. **See Appendix I**

II. Facility Siting Criteria

Provide all Part B responsive information in Appendix II. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

For all new hazardous waste management facilities or areal expansions of existing hazardous waste management facilities provide a report which includes all applicable information regarding Unsuitable Site Characteristics found in 30 TAC Chapter 335, Subchapter G. The report must address each requirement applicable to the type of activity submitted in the application. Reference specific rule numbers whenever possible. Supporting information may be cross-referenced to other parts of this application such as Section V - Engineering Report or Section VI - Geology Report, but information submitted in previous applications must be fully reproduced herein. In addition, provide the information in Table II, as applicable.

For permit renewals provide a report which includes all applicable information regarding Unsuitable Site Characteristics found in 30 TAC Chapter 335, Subchapter G. In addition, provide the information in Table II, as applicable. The applicant may resubmit the information submitted with the original permit application provided this information has not changed. For a renewal this information is necessary to ensure a complete application is received.

The Site Selection Report and Table II are included in Appendix II.

For capacity expansions of existing facilities, please provide information in Table II, as applicable. Please note however, that additional technical information may be requested to address any facility siting characteristics noted in Table I, under Facility Siting Summary.

Not applicable

> **NOTE:** 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)]

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

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

Table II.A is included in Appendix II.

B. Additional Requirements for Land Treatment Facilities [30 TAC 335.204(b)]

Complete Table II.B.-Additional Requirements for Land Treatment Facilities [30 TAC 335.204(b) Not Applicable

C. Additional Requirements for Waste Piles [30 TAC 335.204(c)]

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

Not Applicable

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

Complete Table II.D.- Additional Requirements for Storage Surface Impoundments [30 TAC 335.204(d)] Not Applicable

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

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

Table II.E is included in Appendix II.

F. Flooding

1. Identify whether the facility is located within a 100-year flood plain [40 CFR 270.14(b)(11)(iii)]. This identification must indicate the source of data for such determination and include a copy of relevant documentation (e.g., flood maps, if used and/or calculations). The boundaries of the hazardous waste management facility must be shown on the flood plain map. If the facility is not subject to inundation as a result of a 100-year flood event, indicate that the facility is not within the 100-year flood plain, and do not complete the remainder of the Flooding section in Table II. An applicant for a proposed hazardous waste landfill, areal expansion of a hazardous waste landfill, or a commercial hazardous waste land disposal unit may not rely solely on flood plain maps prepared by the Federal Emergency Management Agency (FEMA) or a successor agency for this determination.

Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map - Map Number 48201C0905N (with a map revision date of May 2, 2019) indicates that while parts of the facility are within the 100-year floodplain, the permitted units are outside of the Special Flood Hazard Areas, including the 100-year floodplain. The FEMA map is included in the Site Selection Report in Appendix II.

2. If the facility is located within the 100-year flood plain the applicant must provide information detailing the specific flooding levels and other events (e.g., Design Hurricane projected by Corps of Engineers) which impact the flood protection of the facility. Information shall also be provided identifying the 100-year flood level and any other special flooding factors (e.g., wave action) which must be considered in designing, construction, operating, or maintaining the facility to withstand washout from a 100-year flood. **Not Applicable**

3. State whether any flood protection devices exist at the facility (e.g., flood walls, dikes, etc.), designed to prevent washout from the 100-year flood.

Not Applicable

a. 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)]

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)]

Not Applicable

b. 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)]

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)]

Not Applicable

4. If applicable, and in lieu of the flood protection devices from above, provide a detailed description of the procedures to be followed to remove hazardous waste to safety before the facility is flooded. [40 CFR 270.14(b)(11)(iv)(c)] The procedures should include: Not Applicable

   a. Timing of such movement relative of flood levels, including estimated time to move the waste, to show that such movement can be completed before flood waters reach the facility. Indicate which specific events shall be use to begin waste movement (e.g., Hurricane warning, Flash Flood watch, etc.);

   b. A description of the location(s) to which the waste will be moved and a demonstration that these facilities will be eligible to receive hazardous waste in accordance with appropriate regulations (i.e., a permitted facility);

   c. The planned procedures, equipment, and personnel to be used and the means to ensure that such resources will be available in time for use; and

   d. The potential for accidental discharges of the waste during movement and precautions taken to preclude accidental discharges.

G. Additional Information Requirements

1. For a new hazardous waste management facility, include a map of relevant local land-use plans and descriptions of the major routes of travel in the vicinity of the facility to be used for the transportation of hazardous waste to and from the facility covering at least a five (5)-mile radius from the boundaries of the facility. [30 TAC 305.50(a)(10)(A)&(D)] **Not applicable; this application is not for a new hazardous waste management facility.**

2. For a new commercial hazardous waste management facility as defined in 30 TAC 335.202 or the subsequent areal expansion of such a facility or unit of that facility, indicate on the map the nearest established residence, church, school, day care center, surface water body used for a public drinking water supply, and dedicated public park. **Not applicable; this application is not for a new commercial hazardous waste management facility.**

3. For new commercial hazardous waste management facilities, submit the following: [30 TAC 305.50(a)(12)(A)] **Not applicable; this application is not for a new commercial hazardous waste management facility.**

   a. the average number, gross weight, type, and size of vehicles used to transport hazardous waste;

   b. the major highways nearest the facility irrespective of distance; and

   c. the public roadways used by vehicles traveling to and from the facility within a minimum radius of 2.5 miles from the facility.

4. Include the names and locations of industrial and other waste-generating facilities within 0.5 miles for a new on-site hazardous waste management facility and the approximate quantity of hazardous waste generated or received

annually at those facilities. [30 TAC 305.50(a)(10)(B)&(C)] **Not applicable; this application is not for a new on-site hazardous waste management facility.**

5. Include the names and locations of industrial and other waste-generating facilities within 1.0 miles for a new commercial hazardous waste management facility and the approximate quantity of hazardous waste generated or received annually at those facilities. [30 TAC 305.50(a)(10)(B)&(C)] **Not applicable; this application is not for a new commercial hazardous waste management facility.**

6. For existing land disposal facility units provide documentation that the information required by 30 TAC 335.5 has been placed in the county deed records. If previously submitted, please reference the submittal by date and registration number. **Copies of the deed recordations for the Moat (NOR 001), the Stormwater Pond (NOR 002), and the Bauxite Pond (NOR 007) are included in Appendix II.G.6.**

7. If a surface impoundment or landfill (including post-closure) is to be permitted, provide exposure information to accompany this application and in accordance with 30 TAC 305.50(a)(8) and 40 CFR 270.10(j). This information will be considered separately from the TCEQ application completeness determination.

   Appendix II.G.7 includes the Exposure Information Report for the active in lieu of closure Stormwater Pond.

   Information for the Closed Moat and Closed Bauxite Pond:

   305.50(a)(8): (A) reasonably foreseeable potential releases from both normal operations and accidents at the unit, including releases associated with transportation to or from the unit: No potential releases foreseeable. Units are closed and capped. In addition, no waste is transported to or from the units.

   (B) the potential pathways of human exposure to hazardous wastes or constituents resulting from documented releases: Potential pathways for human exposure are through potential migration of constituents into the surrounding media. Groundwater is monitored in accordance with the Compliance Plan. There has been no evidence of releases to date.

   (C) the potential magnitude and nature of the human exposure resulting from such releases: There is no potential for human exposure from the closed units.

8. For a hazardous waste management facility requesting a capacity expansion of an existing hazardous waste management facility, please provide in Section VI.A.1.a the requested fault delineation information. [30 TAC 305.50(a)(4)(D)]

   Not Applicable; no expansion is being requested.

III. Facility Management

Provide all Part B responsive information in Appendix III. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

A. Compliance History and Applicant Experience

1. Provide listings of all solid waste management sites in Texas owned, operated, or controlled by the applicant as required by 30 TAC 305.50(a)(2).
The following solid waste management sites in Texas are owned, operated, or controlled by PRSI:

Owner: Pasadena Refining System, Inc.
RN Number: RN100716661
CN Number: CN602779951
Name: Pasadena Refining System, Inc.
Primary Business: Industrial Oil Refining
Address: 111 Red Bluff Road, Pasadena, TX 77506-1530
ISW Reg. No.: 30311

Owner: PRSI Real Property Holdings LLC. (a wholly owned subsidiary of Pasadena Refining System, Inc.)
RN Number: RN100716661
CN Number: CN602779951
Name: Pasadena Paper Company
Primary Business: Production of Coated Paper Products
Address: 901 Shaver Street, Pasadena, TX 77506-4456
ISW Reg. No.: 30582 (inactive) and 86155 (inactive)

2. For a new commercial hazardous waste management facility, provide a summary of the applicant's experience in hazardous waste management as required by 30 TAC 305.50(a)(12)(F). **Not applicable – this is not a new commercial hazardous waste management facility.**

B. Personnel Training Plan

Provide an outline of the facility training plan which includes all the information required by 40 CFR 264.16. Indicate which training will be repeated annually.

Not applicable. There are no operational hazardous waste units addressed by this permit.

C. Security

Describe how the facility complies with the security requirements of 40 CFR 264.14 or submit a justification demonstrating the reasons for requesting a waiver of these requirements.

There are no operational hazardous waste units addressed by this permit. A copy of the Security Plan Summary covering the Moat, Stormwater Pond, Bauxite Pond, and Corrective Action areas is included in Appendix III.C.

D. Inspection Schedule

Describe summary of inspection schedule and Table III.D in Appendix III.D in accordance with instructions below.

Provide an inspection schedule summary for the facility which reflects the requirements of 40 CFR 264.15(b), 264.33 and, where applicable, the specific requirements in 40 CFR 264.174, 264.193(i), 264.195, 264.226, 264.254, 264.273, 264.303, 264.347, 264.552, 264.574, 264.602, 264.1033(f), 264.1034, 264.1052,

264.1053(e), 264.1057, 264.1058, 264.1063, 264.1084, 264.1085, 264.1086, 264.1088, 264.1101(c)(4) and 270.14(b)(5). The inspection schedule should reflect the requirements described below. The schedule should encompass each type of hazardous waste management (HWM) unit (i.e., facility component) and its inspection requirements. For incorporation into a permit, complete Table III.D. - Inspection Schedule for all units to be permitted.

The owner or operator must inspect the facility for malfunctions and deterioration, operator errors, and discharges which may be causing or may lead to the release of hazardous waste constituents to the environment or which may pose a threat to human health. The owner or operator must conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.

The owner or operator must develop and follow a written schedule for inspecting other basic elements such as monitoring equipment, safety and emergency equipment, security devices, the presence of liquids in leak detection systems, where installed, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards.

If the owner or operator of a facility which contains a waste pile wishes to pursue an exemption from the groundwater monitoring requirements for that waste management unit, the inspection schedule must include examination of the base for cracking, deterioration, or other conditions that may result in leaks. The frequency of inspection must be based on the potential for the liner (base) to crack or otherwise deteriorate under the conditions of operation (e.g., waste type, rainfall, loading rates, and subsurface stability).

Inspection schedules for the Moat, Stormwater Pond, and Bauxite Pond are provided in Table III.D and checklists are provided in Appendix III.D. PRSI will remedy any deterioration or malfunction of equipment or structures revealed during inspections on a schedule that prevents the problem from leading to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action will be taken immediately. The date and a description of remedial action taken in response to facility inspections will be included in the inspection records. Inspection records will be kept for at least three years from the date of inspection.

E. Contingency Plan (Not Applicable to Permits for Post-Closure Care Only)

If the owner or operator has already prepared a Spill Prevention, Control, and Countermeasures (SPCC) Plan or some other emergency or contingency plan, he need only amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this section. Provide a Contingency Plan which includes all the information required by 40 CFR Part 264 Subparts C and D, except for 40 CFR 264.56(d)(1) and 30 TAC 335.153(2). This plan must also include a drawing of the facility which shows the location of all emergency equipment. In addition, complete the following tables to summarize information expressed in more detail in the plan.

The most recent update to the Integrated Contingency Plan (ICP), which includes the Emergency Response Action Plan, the Spill Prevention, Control, and Countermeasures (SPCC) Plan, and Contingency Plan, was in May 2024. The full text of the ICP was included with the Class 2 Permit Modification submitted on May 30, 2024. As requested by TCEQ following submittal of the modification, this permit renewal application includes only the required tables listed below, excerpts from the ICP providing the information required by 40 CFR Part 264 Subparts C and D, except for 40 CFR 264.56(d)(1) and 30 TAC 335.153(2), and drawings of the facility showing the location of all emergency equipment. These items are included in Appendix III.E. A copy of the integrated contingency plan is maintained in the operating record and is made available to local authorities. A copy will be provided

to TCEQ upon request.

1. Arrangements with Local Authorities
   Complete Table III.E.1. - Arrangements With Local Authorities to indicate arrangements (if made) with local authorities to familiarize local fire and police departments, local hospitals, equipment suppliers, and local and State emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes. Provide documentation of the attempts and any arrangements made with local authorities and emergency response teams. Table III.E.1 is included in Appendix III.E.

2. Emergency Coordinator's List
   For inclusion into a permit, list in Table III.E.2. - Emergency Coordinators the persons qualified to act as emergency coordinator. List the alternates in the order in which they will assume responsibility.
   Table III.E.2 is included in Appendix III.E. Because the facility operates 24/7, there is always an Emergency Coordinator on-site, including during shutdowns, holidays, and hurricane evacuations. Therefore, PRSI respectfully requests that in order to protect the privacy of individuals, the facility be exempted from the requirement to list home addresses. All other information required by the table is included.

3. Emergency Equipment List
   For inclusion into a permit, list in Table III.E.3. - Emergency Equipment all types of emergency equipment at the facility [such as fire-extinguishing systems, spill-control equipment, communications and alarm systems (internal and external), and decontamination equipment], if this equipment is required. Briefly outline the equipment capabilities.
   Table III.E.3 is included in Appendix III.E.

4. Waiver from Preparedness and Prevention Requirements
   If the owner or operator wishes to request a waiver from any of the preparedness and prevention requirements, he must submit a justification demonstrating the reasons for requesting the waiver, as discussed below.
   Not applicable

F. Emergency Response Plan

For a new commercial hazardous waste management facility, the application shall contain evidence sufficient to demonstrate that emergency response capabilities are available or will be available before the facility first receives waste. An emergency response plan must be provided which satisfies the requirements of 30 TAC 305.50(a)(12)(C) and (D). This plan must show that the proposed facility has sufficient emergency response capabilities for managing a reasonable worst-case emergency condition associated with the operation of the facility. (For financial assurance requirements associated with the emergency response activities, please see Section VIII.C.3.) Not applicable

1. Practice Drills

   In addition to the contingency plan required under 40 Code of Federal Regulations Part 270.14(b)(7), provisions specifying procedures and timing of practice facility evacuation drills are required. Provide a description and a frequency for facility evacuation drills.

2. If a private corporation, municipality or county group will provide emergency response actions at the proposed facility, include a copy of the contract for this type of agreement with this application or state that documentation will be

submitted before the facility accepts wastes.

3. Historical weather data for the area should be documented and submitted. Information regarding how emergency response operations may be affected by weather conditions should be included. (Local rainfall extremes, average rainfall amounts, average wind speeds and directions, potential for major weather events such as hurricanes, tornados, icy conditions, flash flooding etc., should be addressed.)

4. A definition of a worst-case emergency for the proposed facility should be described in the application. This worst-case emergency should take into account the possible complications involved with a facility emergency compounded by adverse weather conditions. It should also detail spills, fires, explosions, etc. This worst case scenario should be developed with the help of local governmental entities where possible. Emergency planning should include both unexpected emergencies and emergencies occurring as a result of a predictable event such as a flood or hurricane. For areas which are prone to hurricanes and flash flooding, the worst case which allows for a realistic situation should be used. For example, response teams should be well versed in reacting to events such as a 100-year flood.

5. A training program for personnel who will respond to these types of emergencies must be provided and must include the requirements described in OSHA Federal Register 1910 and EPA Federal Register 311, the Texas Hazard Communication Act, SARA Title III 302, 304, 311, 312, and 313. If emergency response actions are contracted out, the contracted employees must be properly trained and documentation of this training must be maintained on-site. All responders to emergencies at the proposed facility must be involved in training and drills at the facility in order to be thoroughly familiar with the facility and its operations.

6. The application must include a description and identification of first-responders (i.e. all pertinent facility personnel, local responders, and contractors). The duties of the facility employee who is to be the on-scene coordinator (OSC) must be described. Additional information must be provided detailing the OSC's role in the emergency response activities. This person must have the authority to commit the resources needed to carry out the Emergency Response Plan. His duties must be thoroughly described so that it is clear whether he will remain in control once the emergency response team arrives or whether he will relinquish control to another incident commander upon that person's arrival on the scene. Additionally, there must be a qualified OSC on-site or on call 24 hours a day. The name, address and phone numbers (home and work) of the OSC(s) must be listed in the Emergency Response Plan. Where more than one person is listed, one must be named as the primary OSC and others must be listed in the order in which they will assume responsibility as alternates.

7. Local or regional emergency medical services or hospitals which have experience in hazardous materials training must be identified in the application. The names, addresses and phone numbers of the hospitals or medical centers should be listed here and updated as necessary. Additionally, maps showing the quickest routes to the medical services must be provided. A description of decontamination procedures for injured personnel prior to transport to medical services must also be provided. The decontamination and transport of injured people to appropriate medical centers must be included in the emergency evacuation training and drills.

8. A pre-disaster plan which includes training drills must be included in the application. This plan should include a schedule for staging evacuations of the facility and for emergency response training drills. At least two evacuations and

two emergency response drills should occur annually. The plan should also include additional drills for responding to "predictable" emergencies such as floods and hurricanes. The plan must include the following (or must reference applicable sections of the Contingency Plan): a description of arrangements already in place with local authorities; emergency phone numbers; internal communication or alarm systems and proper alarm codes; a list of all types of emergency equipment at the facility, including a physical description and the capabilities of each item on the list, and the location of each item (a map would be useful here); a description of decontamination equipment; an evacuation plan including signals, evacuation routes and alternate evacuation routes; listing of pertinent first responder emergency phone numbers, and codes for other types of communication devices; and a description of actions that will be performed in the event that a "predictable" emergency occurs.

9. Describe the mechanism which will be used to notify first responders and appropriate local governmental entities that an emergency has occurred. Also describe the mechanism which will be used to notify all applicable governmental agencies when an incident occurs (i.e., TCEQ, Texas Parks and Wildlife, General Land Office, TCEQ Office of Air Quality, Texas Department of Health, and the Texas Railroad Commission).

10. Evidence must be provided that shows coordination with the Local Emergency Planning Committee (LEPC) and any local comprehensive emergency management plan. The applicants should be able to show compliance with SARA Title III.

11. Any medical response capabilities proposed for the facility property must be detailed in the application.

IV. Wastes and Waste Analysis

Provide all Part B responsive information in Appendix IV. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

A. Waste Management Information

For a new hazardous waste management facility or for a facility hazardous waste management capacity expansion, complete Table IV.A. - Waste Management Information for each waste, source, and volume of waste to be stored, processed, or disposed of in the facility units to be permitted as required by 30 TAC 305.50(a)(9). For on-site facilities, list "on-site" for the waste source. For off-site facilities, list the source of the waste. If unknown, identify potential sources (e.g., industries/processes to be serviced).

Not applicable. This is not an application for a new hazardous waste management facility or for a capacity expansion.

B. Waste Managed In Permitted Units

For all hazardous waste management facilities and for inclusion into a permit, complete Table IV.B. - Wastes Managed In Permitted Units for each waste and debris to be managed in a permitted unit. Provide a description, EPA waste codes, and TCEQ waste form codes and classification codes. Guidelines for the Classification & Coding of Industrial Wastes and Hazardous Wastes, TCEQ publication RG-22, contains guidance for how to properly classify and code industrial waste and hazardous waste in accordance with 30 TAC 335.501-335.515 (Subchapter R).

Applicants need not specify the complete 8-digit waste code formulas for their wastes but must include the 3-digit form codes and 1-digit classification codes. This allows the applicant to specify major categories of wastes in an overall manner without having to list all the specific waste streams as generated.

Not applicable. No hazardous wastes are currently managed in any permitted unit including the Moat (NOR 001), Stormwater Pond (NOR 002), and Bauxite Pond (NOR 007) as indicated in the most recent Notice of Registration (NOR). However, Stormwater Pond waste is analyzed annually for benzene in accordance with the closure plan. Table IV.B is included in Appendix IV.

C. Sampling and Analytical Methods

For inclusion into a permit, complete Table IV.C. - Sampling and Analytical Methods for each waste and debris proposed to be sampled and analyzed and include sampling location, sampling method, sample frequency, analytical method, and desired accuracy level for each waste and debris to be managed in a permitted, storage, processing, or disposal unit at the facility.

This permit does not include any operational hazardous waste management units. Wastes will be sampled and analyzed in accordance with the closure plan for the Stormwater Pond. Table IV.C is included in Appendix IV.

D. Waste Analysis Plan

The Waste Analysis Plan must address the requirements of 40 CFR §264.13 and §268.7. The Plan should include supplemental and coordinating information on how the facility will analyze wastes and debris (as listed in Table IV.B) to be managed in permitted units. The plan must address the determination of land disposal restrictions. Generators must determine and certify with the manifest the land disposal restriction status of a waste, even if the waste or debris is not intended for land disposal. Land disposal treatment facilities must identify the treatment process and analytical procedures to be used, and include them in the waste analysis plan. Land disposal restriction records must be maintained at the facility until closure of the facility [40

CFR §264.73(b)]. Landfill facilities must determine through the Paint Filter Liquids Test (SW-846 Method 9095) if there is free liquid in a bulk or containerized waste to be landfilled. If so, it must be stabilized; adding adsorbents alone is not acceptable, even for containerized waste.

For off-site facilities the waste analysis plan must specify procedures which will be used to inspect and, if necessary, analyze each movement of industrial and hazardous waste or hazardous debris received at the facility to ensure it matches the identity ofthe waste designated on the accompanying shipping ticket. The plan must describe methods which will be used to determine the identity of each movement of waste and debris managed at the facility and sampling method used if the identification method includes sampling in order to store, process, or dispose of the wastes and debris in accordance with 40 CFR Parts 264 and 268 and any abnormal characteristics which may upset further treatment or processing operations. Include rejection criteria for shipments of waste and debris received at the facility

For on-site facilities the waste analysis plan must specify the normal characteristics of the waste (including EPA hazardous waste codes, EPA hazard codes, and 40 CFR Part 261, Appendix VIII Hazardous Constituents) which must be known to store, process, or dispose of the wastes and debris in accordance with 40 CFR Parts 264 and 268 and any abnormal characteristics which may upset further treatment or processing operations.

The methods and equipment used for sampling waste materials will vary with the form and consistency of the waste materials to be sampled. Those sampling methods listed in 40 CFR Part 261 Appendix I, for sampling waste with properties similar to the indicated materials, or equivalent sampling methods approved by EPA under 40 CFR §260.20 and §260.21, will be considered by the TCEQ to be acceptable.

Not applicable. This permit does not include any operational hazardous waste management units. Wastes will be sampled and analyzed in accordance with the closure plan for the Stormwater Pond. A summary waste analysis plan is included in Appendix IV.D.

V. Engineering Reports

Provide all Part B responsive information in Appendix V. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

For multiple units provide an include all Part B responsive information in a separate Appendix for each unit.

The engineering report represents the conceptual basis for the storage, processing, or disposal units at the hazardous waste management (HWM) facility. It should include calculations and other such engineering information as may be necessary to follow the logical development of the facility design. Plans and specifications are an integral part of the report. They should include construction procedures, materials specifications, dimensions, design capacities relative to the volume of wastes (as appropriate), and the information required by 40 CFR 270.14(b)(8), 270.14(b)(10). Since these reports may be incorporated into any issued permit, the report should not include trade names, manufacturers, or vendors of specific materials, equipment, or services unless such information is critical to the technical adequacy of the material. Technical specifications and required performance standards are sufficient to conduct a technical review. For landfills, surface impoundments, and waste piles, a Construction Quality Assurance Plan, which considers the guidance in EPA publication 530-SW-85-014, Minimum Technology Guidance on Double Liner Systems for Landfills and Surface Impoundments; Design, Construction, and Operation, and/or EPA/600/R-93/182, Quality Assurance And Quality Control For Waste Containment Facilities, should be submitted.

For facilities which will receive wastes from off-site sources, the engineering report must also contain information on the units which will manage these off-site wastes in accordance with 30 TAC 335.45(a).

Certain ancillary components or appurtenant devices must be addressed in the Part B application. These include but are not limited to sumps, pipelines, ditches, and canals. The technical information and the level of detail required will vary with the nature, scope, and location of the ancillary component. At a minimum they should be included in descriptions of piping and process flow. More information may be required. A single area containing a large number of ancillary components or a remote appurtenant device in an unusually sensitive location may warrant some specific permit requirements. All ancillary components must be included in calculating closure cost estimates.

In each of the unit-specific sections, describe precautions taken to prevent accidental commingling of incompatible wastes. If reactive or ignitable wastes are to be managed, or if incompatible wastes are deliberately commingled, provide information to ensure that precautions are taken to avoid danger due to:

- generation of extreme heat or pressure, fire, explosion, or violent reaction;
- production of uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health;
- production of uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosion;
- damaging the structural integrity of the device or facility containing the waste; or
- threatening human health or the environment by any other means.

Comprehensive consideration should be given to ensure that the facility is designed in accordance with good public health and hazardous waste management practices. The application will be evaluated primarily for the aspects of design covered by the regulations. Nothing in any approval is intended to relieve the facility owner or operator of any liabilities or responsibilities with respect to the design, construction, or operation of the project.

A. General Engineering Reports

1. General Information

Complete Table V.A. - Facility Waste Management Handling Units listing all past, current or proposed units. *[Indicate units' status as* Active, Closed, Inactive *(built but not yet managing waste)*, Proposed *(not yet built)*, Never Built, Transferred, or Post-Closure. *Indicate appropriate units for Capacity information.]* **Note for renewals and modifications involving adding or dropping units from the permit:** List all TCEQ Permit Unit Numbers that have been assigned previously as in a current permit Attachment D -Authorized Facility Units table and do not reuse or reassign permit numbers for units that have been replaced, closed, removed from the permit, or transferred to other ownership. All Notice of Registration (NOR) Numbers must match the State of Texas Environmental Electronic Reporting System (STEERS) and may not be reused for replacement units.

Provide an overall plan view of the entire facility. Identify each hazardous or industrial solid waste management unit (container storage area, tank, incinerator, etc.) to be permitted in relation to its location and the type of waste managed in that unit. Also provide a plan view at an appropriate scale to clearly show the location of all hazardous waste management units to be permitted on one or more 8 1/2" x 14" sheets. Indicate on this plan view how the design or operation provides for buffer zones or waste segregation as appropriate for incompatible, ignitable, or reactive wastes.

Submit a topographic map or maps of the facility which clearly shows the information specified in 40 CFR 270.14(b)(19), 270.14(c)(3), and 270.14(d)(1)(i) (for large HWM facilities, the TCEQ will allow the use of other scales on a case-by-case basis). Please note that the term "facility" includes all contiguous land, structures, other appurtenances, and improvements on the land for storing, processing, or disposing of hazardous and industrial solid waste.

Table V.A, plan views of the entire facility, and topographic maps are included in Appendix V.A.

2. Features to Mitigate Unsuitable Site Characteristics

For all new hazardous waste management storage and/or processing facilities or areal expansions of existing hazardous waste management storage and/or processing facilities, include in the engineering report design, construction, and operational information specified in 30 TAC 335.204(a)(1) and (a)(3) through (9).

Not applicable. This application is not for a new hazardous waste management facility or an expansion of an existing facility.

3. Construction Schedules

Not applicable. No operating hazardous waste management units are included in this application, and this is not a commercial facility.

a. In order to meet the required design standards, extensive retrofitting of some facilities may be required. In the worst case, the applicant may elect to close certain operations rather than comply with the RCRA standards. Thus, the permit may specify a schedule of compliance requiring the accomplishment of given tasks within specific time frames. As required, indicate an appropriate schedule(s) of compliance in this application. The

schedule should provide for facility compliance as soon as possible and in accordance with 40 CFR 270.33(a)(2) and 270.33(b).

b. For commercial hazardous waste management facilities, permit applications (new, renewal, or interim status applications), major amendments, and Class 3 modifications must include a construction schedule. A construction schedule must be submitted even if the application does not include an addition of units or a revision to permitted units. This schedule should comply with the requirements of 30 TAC 305.149.

4. Provide detailed plans and specifications which when, accompanied by the engineering report, will be sufficiently detailed and complete to allow the Executive Director to ascertain whether the facility will be constructed and operated in compliance with all pertinent permitting requirements. Engineering plans and specifications must be prepared under the supervision of and sealed by a licensed Professional Engineer, with current license, along with the Registered Engineering Firm's name and Registration Number as required by the Texas Engineering Practice Act. For some facilities, plans in the form of a standard piping and instrumentation diagram will be sufficient. Overall dimensions and materials of construction must be shown.

Not applicable. This application is not for construction of a new facility.

B. Container Storage Areas **Not applicable**

1. Provide an engineering report which includes all of the information specified in 40 CFR 264.170-264.173, 264.175-264.177, and 270.15.
Complete Table V.B - Container Storage Areas and list the container storage areas covered by this application to be permitted. List the N.O.R. unit number, the rated capacity or size of each unit (including the maximum number of each type of container to be stored at each unit and total maximum capacity of all types wastes stored in the unit), the areal dimensions, containment volume, aisle space requirements, whether ignitable, reactive, or incompatible waste will be stored in each unit, and whether processing will occur within the unit.

2. Container storage areas must have a containment system that is capable of collecting and holding spills, leaks, and precipitation. In addition to the requirements of 40 CFR 270.15, the design report should include the following:

a. Capacity of the containment relative to the number and volume of containers to be stored; in addition, for unenclosed areas, the amount of rainfall collected prior to removal. The TCEQ recommends using a 25-year, 24-hour rainfall event for this extra capacity; and

b. Run-on into the containment system must be prevented, or a collection system with sufficient excess capacity must be provided. If run-on is collected within the containment system, delineate the area(s) from which run-on is collected. The 25-year, 24-hour rainfall event should be used to calculate the excess capacity.

3. Wastes Containing No Free Liquids
With the exception of 40 CFR 264.175(d), storage areas that hold only wastes that do not contain free liquids need not have a containment system, provided that compliance with 40 CFR 264.175(c) is demonstrated. This demonstration must be submitted as part of the application and must include:

a. test procedures and results or other documentation or information to show that the wastes do not contain free liquids; and

b. a description of how the storage area is designed or operated to drain and remove liquids or how containers are kept from contact with standing

liquids.

4. Managing Ignitable or Reactive Wastes

   If a container storage area will manage ignitable or reactive waste, as indicated on Table V.B, provide in the engineering report drawings demonstrating compliance with the buffer zone requirement of 40 CFR 264.17 and 264.176.

5. Managing Incompatible Wastes

   If a container storage area will manage incompatible waste, as indicated on Table V.B, provide in the engineering report a description of the procedures used to ensure compliance with 40 CFR 264.17 and 264.177.

6. Managing Nonhazardous Wastes and/or Universal Wastes

   If a container storage area will manage nonhazardous wastes, and/or universal wastes in addition to hazardous waste, provide a description of all types of wastes managed in the engineering report and procedures used to ensure compliance with 40 CFR 264 Subpart I.

C. Tanks and Tank Systems **Not applicable**

Provide an engineering report which includes all of the information specified in 40 CFR 264.190-264.194, 264.196, 264.198-264.199, and 270.16.

1. For inclusion into a permit, complete Table V.C - Tanks and Tank Systems and list the tanks covered by this application to be permitted. List the N.O.R. unit number, whether the unit is for storage and/or processing, the waste managed in each unit, the rated capacity of each unit, overall dimensions of each unit, containment volume, and whether ignitable, reactive, or incompatible waste will be stored in each unit.

2. For inclusion into a permit, complete Table V.C - Tanks and Tank Systems and list the tanks covered by this application to be permitted. List the N.O.R. unit number, whether the unit is for storage and/or processing, the waste managed in each unit, the rated capacity of each unit, overall dimensions of each unit, containment volume, and whether ignitable, reactive, or incompatible waste will be stored in each unit.

3. If a tank will manage incompatible waste, as indicated on Table V.C, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.199.

4. Submit written assessments that were reviewed and certified by an independent, qualified licensed Professional Engineer that attests to the structural integrity and suitability of handling the hazardous waste for each tank system, as required under 40 CFR 264.191-264.192 for existing tanks which do not have secondary containment meeting the standards of 40 CFR 264.193. The engineer signing the written assessment must make the certification specified in 40 CFR 270.11(d). The certification must be sealed by a licensed Professional Engineer, with current license, along with the Registered Engineering Firm's name and Registration Number as required by the Texas Engineering Practice Act.

5. If a tank has been de-rated or if the permitted capacity is otherwise different from the design capacity, specify any such change(s) in the engineering report.

   Provide in the report any additional information for tanks and tank systems as specified in the above regulatory citations including: specifics of leak, spill, and unfit for use systems responses; assessments of tank systems; new tank systems or components; overfill control and prevention; special requirements for ignitable and/or reactive wastes; incompatible wastes; air emissions control; detection of leaks into secondary containment; ancillary equipment; and plans and specifications individually sealed by a licensed professional engineer with

current Texas registration with the Registered Engineering Firm's name and Registration number.

D. Surface Impoundments

For Surface Impoundments Closed as a Landfill

1. Provide as-built plans and specifications for the final cover system, individually for each unit that is sealed, signed and dated by a licensed professional engineer with current Texas registration along with the Registered Engineering Firm's name and Registration Number would satisfy this requirement; Other as-built plans and specifications for the unit may be submitted upon request.

The Bauxite Pond (NOR 007) and Moat (NOR 001) were certified closed as RCRA-regulated landfills on October 11, 1990 and April 9, 1991, respectively, with TCEQ acceptance on March 20, 1992. The acceptance of closure certifications is included in Appendix V.D. This application only addresses post-closure care and compliance monitoring or corrective action for these units; therefore, the unit-specific engineering reports are not submitted.

An Engineering Report describing the closure activities conducted to obtain interim closure of the Stormwater Pond (NOR 002) is included in Appendix V.D. The report is from the Part B application dated May 1998. This report is submitted for historical continuity and was previously reviewed and approved by TCEQ.

The interim closed Stormwater Pond acts as a catchment basin for rainwater that falls within the confines of the unit. A berm around the perimeter prevents run-on from entering the unit. Any rainwater that accumulates within the Stormwater Pond is pumped directly to the CPI oil/water separator or diverted to stormwater tank 400, which eventually flows to the CPI. The Stormwater Pond is inspected weekly and after significant rainfall events per Table III.D – Inspection Schedule to prevent releases of accumulated rainwater.

2. Complete Table V.D.1 - Surface Impoundments and list the surface impoundments, covered by this application, to be permitted. List the waste(s) managed in each unit and the rated capacity or size of each unit.

Table V.D.1 is included in Appendix V.D.

3. Complete Table V.D. 6. - Surface Impoundment Liner System for each surface impoundment to be permitted.

TablTable V.D.6 is included in Appendix V.D.

For Proposed or Active Surface Impoundments

Not applicable. This application does not include any proposed or active surface impoundments.

Provide an engineering report which includes all of the information specified in 30 TAC 305.50(a)(6), 335.168, 335.169, and 40 CFR 264.19, 264.220, 264.221, 264.222, 264.223, 264.226(a) and (c), 264.227, 264.229-264.231, and 270.17.

For storage surface impoundments at a new hazardous waste management facility or which are part of an areal expansion of an existing hazardous waste management facility, include in the engineering report design, construction, and operational information specified in 30 TAC 335.204(d). For any surface impoundment to be closed as a landfill (where wastes will remain after closure of the impoundment) at a new hazardous waste management facility or which are part of an areal expansion of an

existing hazardous waste management facility, include in the engineering report design, construction, and operational information specified in 30 TAC 335.204(e).

For all impoundments, include in the report the following information.

1. Complete Table V.D.1 - Surface Impoundments and list the surface impoundments, covered by this application, to be permitted. List the waste(s) managed in each unit and the rated capacity or size of each unit.

2. If a surface impoundment will manage ignitable or reactive waste, as indicated on Table V.D.1., describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.229.

3. If a surface impoundment will manage incompatible waste, as indicated on Table V.D.1., describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.230.

4. If a surface impoundment will manage F020, F021, F022, F023, F026, and F027 waste, as indicated on Table V.D.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.231.

5. Describe the surface impoundment. Detailed plan view and cross-sectional drawings of the surface impoundment should be included with the engineering report.

6. Freeboard
   Specify the minimum freeboard to be maintained and the basis of the design to prevent overtopping resulting from normal or abnormal operations; overfilling; wind and wave action; rainfall; run-on; malfunctions of level controllers, alarms, and other equipment; and human error. Show that adequate freeboard will be available to prevent overtopping from a 100-year, 24-hour storm. [40 CFR 264.221(g)]
   If the impoundment is inflow sensitive, it should be equipped with a high-level alarm based on a different level sensor than that used for automatic control.

7. Waste Flow
   Describe the means that will be used to immediately shut off the flow of waste to the impoundment to prevent overtopping or in the event of liner failure, and include appropriate detailed drawings.
   If the surface impoundment is a flow-through facility describe the flow of waste, including a hydraulic profile.

8. Dike Construction

   a. If dikes are used, download the dike design and materials of construction engineering certification from the attachments **list** the following certification as part of the engineering report:

   b. The structural integrity of the dike system must be certified by a qualified Professional Engineer before a permit is issued. If the impoundment is not being used, the dike licensed system must be certified before it can be put into use. The certification must be sealed by a licensed Professional Engineer, with current license, along with the Registered Engineering Firm's name and Registration Number as required by the Texas Engineering Practice Act.

   c. A report shall accompany the dike certification which summarizes the activities, calculations, and laboratory and field analyses performed in

support of the dike certification. Describe the design basis used in construction of the dikes. Provide the following analyses as attachments to the engineering report (A Quality Assurance Project Plan <QAPP> should be included in the report to ensure that each analysis is performed appropriately):

(1) Slope Stability Analysis
(2) Hydrostatic and Hydrodynamic Analysis
(3) Storm Loading
(4) Rapid Drawdown

d. Earthen dikes should have a protective cover to minimize wind and water erosion and to preserve the structural integrity of the dike. Describe the protective cover used and describe its installation and maintenance.

9. Containment System

We suggest that the applicant use available recognized guidance documents, such as EPA publication 530-SW-85-014, which provide design guidance for liner systems. The applicant is strongly encouraged to test each synthetic liner after installation by an electrical leak location test, such as the electric field method described in EPA Technical Guidance Document EPA/600/R-93/182, Quality Assurance and Quality Control for Waste Containment Facilities, or an equivalent method, such as those found in ASTM publications, and approved by the Executive Director. Construction above the liner may not proceed until any detected leaks are sealed.

a. Complete Table V.D. 6. - Surface Impoundment Liner System for each surface impoundment to be permitted.

b. In the engineering report, describe the design, installation and operation of liner and leak detection components. The description must demonstrate that the liner and leak detection system will prevent discharge to the land, and ground and surface water. Include the following analyses as attachments to the engineering report (A QAPP should be included in the report to ensure that each analysis is performed appropriately):

For artificial liners:

(1) Seaming method
(2) Surface preparation method
(3) Tensile Strength
(4) Impact Resistance
(5) Compatibility Demonstration
(6) Foundation Design (including Settlement Potential, Bearing Capacity and Stability, and Potential for Bottom Heave Blow-out)

For soil liners:

(1) Waste Migration Analysis (based on head, porosity, and permeability) for the most mobile and least attenuated waste constituents
(2) Atterberg Limits, % passing a #200 sieve, and Permeability
(3) Moisture Content
(4) Standard Proctor Density, Compaction Data

For leachate collection systems:

(1) Pipe Material and Strength
(2) Pipe Network Spacing and Grading
(3) Collection Sump(s) Material and Strength
(4) Drainage Media Specifications and Performance

(5) Analyses showing that pipe and pipe perforation size will prevent clogging and allow free liquid access to the pipe.
(6) Compatibility Demonstration
(7) Capacity of System
(a) rate of leachate removal
(b) capacity of sumps
(c) thickness of mounding and maximum hydraulic head

c. Specify the liner system installation date and expected lifetime of liner system (years).

d. Specify whether the liner is chemically resistant to the waste and how this resistance was determined. Attach any tests or documentation to the engineering report.

e. Submit a quality assurance/quality control plan for all components to demonstrate that all components will be properly installed and will perform to design specifications.

f. Submit a Response Action Plan that proposes actions to be taken if the Action Leakage Rate for the surface impoundment exceeds. At a minimum the Response Action Plan must include the requirements of 40 CFR 264.223.

10. Surface impoundments that receive waste on or after May 8, 1985 (or for newly-regulated units, the effective date of the new RCRA regulation) into new units and/or lateral expansions or replacements of existing units must meet the minimum technological requirements of the Hazardous and Solid Waste Amendments of 1984, unless an appropriate waiver is granted by the Commission. The owner or operator of each new surface impoundment unit for which the construction commences after January 29, 1992, or each lateral expansion of an existing surface impoundment unit where construction commences after July 29, 1992, or replacement of an existing surface impoundment unit that commence reuse after July 29, 1992 must install two or more liners and leachate collection and removal system unless commission approves alternate design or operating practices. Plans and specifications for both new and existing surface impoundments must demonstrate conformity with 30 TAC 335.168 and 40 CFR 264.221

11. Run-on Diversion

Describe in detail how the surface impoundment system will manage stormwater run-on away from the surface impoundment. Stormwater run-on must be diverted away from a surface impoundment. Use at least a 100-year, 24-hour rainfall event in the design and analysis of diversion structures. Where dikes are used to divert run-on, they must be protected from erosion. Include all analyses used to calculate run-on volumes.

12. The Commission may approve an alternate design or operating practice for a surface impoundment if the owner or operator demonstrates that such design or operating practices, together with location characteristics [40 CFR 264.221(d)]:

a. Will prevent the migration of hazardous constituents into the groundwater or surface water at least as effectively as the liners and leachate collection and removal system required by 40 CFR 264.221; and

b. Will allow detection leaks of hazardous constituents through the top liner at least as effectively.

13. Exemption from Double-Liner Requirements for Monofills [264.221(e)]

Owners or operators of hazardous waste surface impoundment monofills will be exempted from the double-liner requirements if the Commission finds, based on a demonstration by the owner or operator, that alternative design and operating practices, together with location characteristics are at least as effective as a double liner in preventing migration of hazardous constituents to the groundwater or surface water. If an exemption is sought, submit detailed plans and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the groundwater or surface water at any future time.

E. Waste Piles

Not Applicable

This section applies to owners or operators of industrial solid waste facilities that store or process hazardous waste in piles. A hazardous waste pile that will be closed with wastes left in place must be managed as a landfill. Existing portions of waste piles are those areas that were listed on the original Part A and on which wastes have been lawfully placed.

For Waste Piles Closed as a Landfill

1. Provide as-built plans and specifications for the final cover system, individually for each unit that is sealed, signed and dated by a licensed professional engineer with current Texas registration along with the Registered Engineering Firm's name and Registration Number would satisfy this requirement; Other as-built plans and specifications for the unit may be submitted upon request.
2. Complete Table V.E.1 - Waste Piles and list the waste piles covered by this application. List the waste managed in each unit and the rated capacity or size of the unit.
3. Complete Table V.E. 3 - Waste Pile Liner System and specify the type of containment/ liner system.

   Provide an engineering report which includes all of the information specified in 30 TAC 335.170 and 40 CFR 264.19, 264.250, 264.251, 264.252-264.253, 264.254(a) and (c), 264.256, 264.257, 264.259, and 270.18.

   For waste piles at a new hazardous waste management facility or which are part of any areal expansion of an existing hazardous waste management facility, include in the engineering report design, construction, and operational information specified in 30 TAC 335.204(c).

   For all waste piles, include in the report the following information.

   1. For inclusion into a permit, complete Table V.E.1 - Waste Piles and list the waste piles covered by this application. List the waste managed in each unit and the rated capacity or size of the unit.
   2. If a waste pile will manage ignitable or reactive waste, as indicated on Table V.E.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.256.
   3. If a waste pile will manage incompatible waste, as indicated on Table V.E.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.257.
   4. If a waste pile will manage F020, F021, F022, F023, F026, and F027 waste, as

indicated on Table V.E.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.259.

5. Describe the waste pile, including any structure surrounding or enclosing the waste pile.

6. Containment System
We suggest that the applicant use available recognized guidance documents, such as EPA publication 530-SW-85-014, which provide design guidance for liner systems. The applicant is strongly encouraged to test each synthetic liner after installation by an electrical leak location test, such as the electric field method described in EPA Technical Guidance Document EPA/600/R-93/182, Quality Assurance and Quality Control for Waste Containment Facilities, or an equivalent method, such as those found in ASTM publications, and approved by the Executive Director. Construction above the liner may not proceed until any detected leaks are sealed.

   a. For inclusion into a permit, complete Table V.E. 3 - Waste Pile Liner System and specify the type of containment/liner system.

   b. In the engineering report, describe the design, installation, construction, and operation of the liner and leachate collection system. The description must demonstrate that containment systems will prevent discharge to the land, surface water, or groundwater. Include the following analyses as attachments to the engineering report, when applicable to the containment system being described (A QAPP should be included in the report to ensure that each analysis is performed appropriately):

For artificial liners:

(1) Seaming method
(2) Surface preparation method
(3) Tensile Strength
(4) Impact Resistance
(5) Compatibility Demonstration
(6) Foundation Design (including Settlement Potential, Bearing Capacity and Stability, and Potential for Bottom Heave Blow-out)

For soil liners:

(7) Waste Migration Analysis (based on head, porosity, and permeability) for the most mobile and least attenuated constituents.
(8) Atterberg Limits, % passing a #200 sieve, and Permeability
(9) Moisture Content
(10) Standard Proctor Density, Compaction Data

For leachate detection, collection, and removal system:

(11) Capacity of system
   (a) rate of leachate removal
   (b) capacity of sumps
   (c) thickness of mounding and maximum hydraulic head
(12) Pipe Material and Strength
(13) Pipe Network Spacing and Grading
(14) Collection Sump(s) Material and Strength
(15) Drainage Media Specifications and Performance

(16) Analysis showing that pipe and perforation size will prevent clogging and allow free liquid access to the pipe.
(17) Compatibility Demonstration

c. Containment/liner system installation date and expected lifetime of liner system (years).

d. Specify whether the containment/liner system is chemically resistant to the waste and how this resistance was determined. Attach any tests or documentation to the engineering report.

e. Submit a quality assurance/quality control plan for all components to demonstrate that all components will be properly installed and will perform to design specifications.

f. Submit a Response Action Plan that proposes actions to be taken if the Action Leakage Rate for the waste pile exceeds. At a minimum the Response Action Plan must include the requirements of 40 CFR 264.253.

7. Wind Dispersal [30 TAC 335.170(j)]

Waste piles containing hazardous waste which could be subject to dispersal by wind must be covered or otherwise managed so that wind dispersal is minimized. Describe practices to control wind dispersal (e.g., cover or frequent wetting) of the hazardous waste.

8. Run-on Diversion [30 TAC 335.170(g)]

Describe in detail the measures used to control and divert run-on from the unit. The owner or operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the pile during peak discharge from at least a 100-year, 24-hour storm.

Include all analyses used to calculate: flow rates; run-on volume and depth; and back-water calculations for the ditches on plant property.

Any tanks or basins associated with the run-on control systems must be emptied or otherwise managed expeditiously after a storm to maintain the design capacity of the system. [30 TAC 335.170(i)]

9. Run-off Control [30 TAC 335.170(h)]

Describe in detail the measures used to control run-off from the unit. Include all analyses used to calculate the run-off volumes.

The owner or operator must design, construct, operate, and maintain a run-off management system to collect and control at least the water volume resulting from a 100-year, 24-hour storm.

Collection and holding facilities (e.g., tanks or basins) associated with the run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain the design capacity of the system. [30 TAC 335.170(i)]

10. Give a description of design and operating procedures to properly manage and/or dispose of any residuals (e.g., leachate) that may be generated during waste management. Describe the management process and any equipment used.

11. Provide a description and list of all equipment and procedures used to place the

waste in or on the waste pile, and how the liner surface will be exposed for inspection, if necessary. A containment system must be protected from plant growth which could puncture any component of the system.

12. Exemption from Liner and Leachate Collection Requirements

The Commission may approve an alternate design or operating practice for a waste pile if the owner or operator demonstrates that such design or operating practices, together with location characteristics [40 CFR 264.251(d)]:

a. Will prevent the migration of hazardous constituents into the groundwater or surface water at least as effectively as the liners and leachate collection and removal system; and

b. Will allow detection leaks of hazardous constituents through the top liner at least as effectively.

13. Exemption from Groundwater Monitoring under 40 CFR 264.250(c)

A waste pile may be exempt from groundwater monitoring if the following standards are met:

a. The waste pile (including its underlying liners) must be located entirely above the seasonal high water table; and

b. The waste pile is inside or under a structure that provides protection from precipitation so that neither run-off nor leachate is generated, provided that:

(1) Liquids or materials containing free liquids are not placed in the pile;

(2) The waste pile is protected from surface water run-on by the structure or in some other manner;

(3) The waste pile is designed and operated to control dispersal of the waste by wind, where necessary, by means other than wetting; and

(4) The waste pile will not generate leachate through decomposition or other reactions; or

c. The waste pile must have a leachate collection and removal system above the top liner; and

d. Underlayment:

(1) either:

(a) The waste pile must be underlain by two liners, which are designed and constructed in a manner that prevents the migration of liquids into or out of the space between the liners and a leak detection system which must be designed, constructed, maintained, and operated between the liners to detect any migration of liquids into the space between the liners; and

(b) A demonstration must be made that there is a low potential for migration of liquid from the waste pile to the uppermost aquifer during the life of the waste pile (including the closure period). The owner or operator must base any predictions made on assumptions that maximize the rate of liquid migration;

(2) or:

(a) The waste pile must be underlain by a liner (base) that is designed, constructed, and installed in a manner that prevents the migration of liquids or waste beyond the liner; and

(b) The wastes in the waste pile must be removed periodically, and the liner must be inspected for deterioration, cracks, or other conditions that may result in leaks. The frequency of inspection will be specified in the inspection plan and must be based on the potential for the liner (base) to crack or otherwise deteriorate under the conditions of operation (e.g., waste type, rainfall, loading rates and subsurface stability).

The liner(s) used to satisfy V.D.13.d. must be of sufficient strength and thickness to prevent failure due to puncture, cracking, tearing, or other physical damage from equipment used to place waste in or on the pile or to clean and expose the liner surface for inspection.

F. Land Treatment Units

Not Applicable

Provide an engineering report which includes all of the information specified in 30 TAC 305.50(a)(6), 335.171, 335.172, 40 CFR 264.270-264.272, 264.273, 264.276, 264.278, 264.279, 264.281-264.283, and 270.20 for each land treatment unit.

For land treatment units at a new hazardous waste management facility or which are part of an areal expansion of an existing hazardous waste management facility, include in the engineering report design, construction, and operational information specified in 30 TAC 335.204(b).

For all land treatment units, include in the report the following information.

1. Complete Tables V.F.1 - Land Treatment Units and V.F.2 - Land Treatment Unit Capacity and list the land treatment units covered by this application. List the waste(s) managed in each unit and the rated capacity or size of the unit. If different wastes are placed on separate portions of the land treatment area, each portion is considered a land treatment unit, and requires a separate summary form and engineering report.

   The treatment zone is defined as the soil area of the unsaturated zone of a land treatment unit within which hazardous constituents are degraded, transformed, or immobilized. In this section, specify the depth of the treatment zone. The maximum depth of the treatment zone for new land treatment units must be [40 CFR 264.271(c)]:

   a. No more than 1.5 meters (5 feet) from the surface; and

   b. More than 1 meter (3 feet) above the seasonal high water table.

2. If a land treatment unit will manage ignitable or reactive waste, as indicated on Table V.F.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.281.

3. If a land treatment unit will manage incompatible waste, as indicated on Table V.F.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.282.

4. If a land treatment unit will manage F020, F021, F022, F023, F026 and F027 waste, as indicated on Table V.F.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.283.

5. Describe the land treatment unit. The report shall include all the information requested in this section including drawings. At a minimum, a plan view and cross-section of the unit should be included with the engineering report.

6. Complete Table V.F.3. - Land Treatment Principal Hazardous Constituents and list the wastes for which the treatment demonstration will be made and the principal hazardous constituents in each waste. Specify in the report the data sources to be used to make the demonstration such as laboratory data, field data, operating data, literature, or other.

7. Run-on Diversion
Describe in detail the measures used to control run-on and divert run-on from the unit. Include all the analyses used to calculate the run-on volumes.
The owner or operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the land treatment unit during peak discharge from a 100-year, 24-hour storm. [30 TAC 335.171(3)]
Collection holding facilities (e.g., tanks or basins) associated with the run-on control system must be emptied or otherwise managed expeditiously after storms to maintain the design capacity of the system. [30 TAC 335.171(5)].

8. Run-off Control
Describe in detail the measures used to control the run-off from the unit, and minimize hazardous constituents in the run-off, include all the analyses used to calculate the run-off volumes.
The owner or operator must design, construct, operate and maintain a run-off management system to collect and control at least the water volume resulting from a 100-year, 24-hour storm. [30 TAC 335.171(4)]
Collection and holding facilities (e.g., tanks or basins) associated with run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system. [30 TAC 335.171(5)]

9. Wind Dispersal
The owner or operator of a land treatment unit containing hazardous waste which could be subject to dispersal by wind must cover or otherwise manage the land treatment unit so that wind dispersal is minimized. Describe practices to control wind dispersal (e.g., cover or frequent wetting) of the hazardous waste. [30 TAC 335.171(6)]

10. Treatment Demonstration
A description of the treatment demonstration required under 40 CFR 264.272 and 270.20(a) shall be included with the engineering report. If the owner or operator intends to conduct field tests or laboratory analyses in order to make the demonstration, he must obtain a treatment or disposal permit.

11. The owner or operator must establish an unsaturated zone monitoring program in accordance with 40 CFR 264.278 and a detailed monitoring program must be included in the application.

12. Food Chain Crops [40 CFR 264.276]

Several conditions must be satisfied if food-chain crops are to be grown in or on the treatment zone. A demonstration must be prepared similar to the one described in the Treatment Demonstration and submitted at least 90 days prior to the planting of crops. The demonstration need not be submitted with this application. However, a description of the demonstration must be included as part of the engineering report. This demonstration may be combined with the Treatment Demonstration description, as some of the information required is identical.

G. Landfills

Not Applicable

For Closed Landfills

1. Provide as-built plans and specifications for the final cover system, individually for each unit that is sealed, signed and dated by a licensed professional engineer with current Texas registration along with the Registered Engineering Firm's name and Registration Number would satisfy this requirement; Other as-built plans and specifications for the unit may be submitted upon request.

2. Complete Table V.G.1 - Landfills and list the landfills (and number of cells, if applicable) covered by this application. List the waste(s) managed in each unit and the rated capacity or size of the unit. If wastes are segregated in some manner, list the cell number in which wastes are placed next to each waste type.

3. Complete Table V.G.3. - Landfill Liner System and specify the type of liner used for the landfill.

4. Complete Table V.G.4. - Landfill Leachate Collection System used for the landfill.

Provide an engineering report which includes all of the information specified in 30 TAC 305.50(a)(5), (6), (9), (10), and (12), 335.173, 40 CFR 264.19, 264.300, 264.301, 264.302, 264.303(a), 264.304, 264.309, 264.312, 264.313, 264.315-264.317, and applicable requirements of 270.21. The text of the report should be written to supplement engineering plans, specifications, and test results necessary to provide a detailed description of how the landfill will comply with these standards.

For landfills at a new hazardous waste management facility or which are part of an areal expansion of an existing hazardous waste management facility, include in the engineering report design, construction, and operational information specified in 30 TAC 335.204(e).

For all landfills, include in the report the following information.

1. Complete Table V.G.1 - Landfills and list the landfills (and number of cells, if applicable) covered by this application. List the waste(s) managed in each unit and the rated capacity or size of the unit. If wastes are segregated in some manner, list the cell number in which wastes are placed next to each waste type.

2. If a landfill will manage ignitable or reactive waste, as indicated on Table V.G.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.312.

3. If a landfill will manage incompatible waste, as indicated on Table V.G.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.313.

4. If a landfill will manage F020, F021, F022, F023, F026, and F027 waste, as indicated on Table V.G.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.317.

5. Describe the landfill. A plan view and cross-section of the landfill should be included with the engineering report. As appropriate, detailed plan, elevation, cross-section of landfill containment facilities shall be included with the report.

6. Containment System
We suggest that the applicant use available recognized guidance documents, such as EPA publication 530-SW-85-014, which provide design guidance for liner systems. The applicant is strongly encouraged to test each synthetic liner after installation by an electrical leak location test, such as the electric field method described in EPA Technical Guidance Document EPA/600/R-93/182, Quality Assurance and Quality Control for Waste Containment Facilities, or an equivalent method, such as those found in ASTM publications, and approved by the Executive Director. Construction above the liner may not proceed until any detected leaks are sealed.

   a. Complete Table V.G.3. - Landfill Liner System and specify the type of liner used for the landfill.

   b. In the engineering report, describe the design, installation, construction, and operation of the liner and leachate collection system. The description must demonstrate that the liner system will prevent discharge to the land, groundwater, and surface water. The following analyses should be included as attachments to the engineering report (A QAPP should be included in the report to ensure that each analysis is performed appropriately):

For artificial liners:

(1) Seaming method
(2) Surface preparation method
(3) Tensile Strength
(4) Impact Resistance
(5) Compatibility Demonstration
(6) Foundation Design (including Settlement Potential, Bearing Capacity and Stability, and Potential for Bottom Heave Blow-out)

For soil liners:

(7) Waste Migration Analysis (based on head, porosity, and permeability) for the most mobile and least attenuated waste constituents
(8) Atterberg Limits, % passing a #200 sieve, and Permeability
(9) Moisture Content
(10) Standard Proctor Density, Compaction Data

For Leachate Collection System

For incorporation into the permit, complete Table V.G.4. - Landfill Leachate Collection System and Table V.G.5 - Landfill Soil Specifications used for the

landfill.

(11) Capacity of the system:
  (a) rate of leachate removal
  (b) capacity of sumps
  (c) thickness of mounding and maximum hydraulic head
(12) Pipe Material and Strength
(13) Pipe Network Spacing and Grading
(14) Collection Sump(s) Material and Strength
(15) Drainage Media Specifications and Performance
(16) Analyses showing that pipe and pipe perforation size will prevent clogging and allow free liquid access to the pipe.
(17) Compatibility Demonstration

c. State whether the liner system components are chemically resistant to the waste and how this resistance was determined. Attach any tests or documentation to the engineering report.

d. Provide a quality assurance/quality control plan for all components to demonstrate that all components will be properly installed and will perform to design specifications.

e. Whether the leachate collection components are chemically resistant to the waste and how this resistance was determined. Attach any tests or documentation to the engineering report.

f. Provide a Response Action Plan that proposes actions to be taken in the case of exceedance of the landfill Action Leakage Rate. At a minimum the Response Action Plan must include the requirements of 40 CFR 264.304.

7. For Dikes:
   a. Slope Stability Analysis;
   b. Hydrostatic and Hydrodynamic Analyses
   c. Ability to withstand scouring from leaking liner.

8. Landfills that receive waste on or after May 8, 1985 (or for newly-regulated units, the effective date of the new RCRA regulation) into new units and/or lateral expansions or replacements of existing units must meet the minimum technological requirements of the Hazardous and Solid Waste Amendments of 1984, unless an appropriate waiver is granted by the Commission. The owner or operator of each new landfill unit for which the construction commences after January 29, 1992, or each lateral expansion of an existing landfill unit where construction commences after July 29, 1992, or replacement of an existing landfill unit that commence reuse after July 29, 1992 must install two or more liners and leachate collection and removal system unless commission approves alternate design or operating practices. Plans and specifications for both new and existing landfills must demonstrate conformity with 30 TAC 335.173 and 40 CFR 264.301(c).

9. Site Development Plan

   Describe the methods used to deposit waste in the landfill. This description should include rate of waste deposition, waste segregation, average lift size, maximum lift, average cell or trench size, maximum cell or trench size, and other information necessary to depict how the landfill will be developed. Do not

include liner or leachate collection system information, closure information, or handling of special wastes. This will be included elsewhere in the report.

10. Run-on Control [30 TAC 335.173(g)]

The owner or operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the landfill during peak discharge from at least a 100-year, 24-hour storm.

In the engineering report, include the following analyses:

a. Run-on volume and depth calculations from the peak discharge of the 100-year, 24-hour storm; and

b. For ditches on the plant property, back-water calculations.

Collection and holding facilities (e.g., tanks or basins) associated with the run-on control system must be emptied or otherwise managed expeditiously. [30 TAC 335.173(i)]

11. Run-off Control [30 TAC 335.173(h)]

The owner or operator must design, construct, operate, and maintain a run-off management system to collect and control the water volume resulting from a 100-year, 24-hour storm.

Include all analyses used to calculate run-off volumes.

Collection and holding facilities (e.g., tanks or basins) associated with run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system. [30 TAC 335.173(i)]

12. Wind Dispersal [30 TAC 335.173(j)]

If the landfill contains any particulate matter which may be subject to wind dispersal, the owner or operator must cover or otherwise manage the landfill to minimize wind dispersal. Based upon the characteristics of the material to be landfilled describe the likelihood of wind dispersal occurring. Describe in detail any method and/or control mechanism used to prevent wind dispersal.

13. Liquid Waste

If liquid waste or waste containing free liquids is to be stabilized and then placed in the landfill, the procedures used to stabilize the waste must be described in the engineering report. The waste must be treated prior to landfilling using a treatment technology that does not solely involve the use of a material that functions primarily as a sorbent. Provide supporting documentation to verify that an appropriate stabilization procedure is used to comply with 30 TAC 335.175.

14. The Commission may approve an alternate design or operating practice for a landfill if the owner or operator demonstrates that such design or operating practices, together with location characteristics [40 CFR 264.301(d)]:

a. Will prevent the migration of hazardous constituents into the groundwater or surface water at least as effectively as the liners and leachate collection and removal system; and

b. Will allow detection leaks of hazardous constituents through the top liner at

least as effectively.

15. Exemption from Double-Liner Requirements for Monofills [264.301(e)]

Owners or operators of hazardous waste monofills will be exempted from the double-liner requirements if the Commission finds, based on a demonstration by the owner or operator, that alternative design and operating practices, together with location characteristics are at least as effective as a double liner in preventing migration of hazardous constituents to the groundwater or surface water. If an exemption is sought, submit detailed plans and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the groundwater or surface water at any future time.

16. Above-grade Benefits

The engineering report must evaluate the benefits, if any, associated with the construction of the landfill above existing grade at the proposed site, the costs associated with the above-grade construction, and the potential adverse effects, if any, which would be associated with the above-grade construction. [TX. Health and Safety Code 361.108]

17. Feasibility Study - Applicable to New Hazardous Waste Landfills or Areal Expansions of Existing Hazardous Waste Landfill

In accordance with the Health and Safety Code Section 361.106 and 30 TAC Section 335.205(a)(2), provide a feasibility study demonstrating that there is no practical, economic, and feasible alternative that is reasonably available to manage the types and classes of hazardous wastes to be disposed of at a proposed new hazardous waste landfill or the areal expansion of an existing hazardous waste landfill.

H. Incinerators

Not Applicable

Engineering Report for Combustion Units

For hazardous waste combustion unit which are subject to regulation by 40 CFR Part 63, Subpart EEE, the requirements 30 TAC Chapter 305 and Subchapters I and Q do not apply when the unit becomes subject to Resource Conservation and Recovery Act (RCRA) permit requirements after October 12, 2005 (i.e., new unit), or no longer apply when an owner or operator of an existing hazardous waste management unit demonstrates compliance with the air emission standards and limitations in 40 Code of Federal Regulations (CFR) Part 63, Subpart EEE, except for the following:

1. Those provisions the Executive Director determines are necessary to comply with 40 CFR §264.345(a) and 40 CFR §264.345(c) for Phase I sources or 40 CFR §266.102(e)(1) and (2)(iii) for Phase II sources if the permittee or applicant elects to comply with any of the options listed in 40 CFR §270.235(a) to minimize emissions of toxic compounds from startup, shutdown, and malfunction events;

2. Those standards and associated requirements for particulate matter, hydrogen chloride and chlorine gas, and non-mercury metals that a Phase II area source elects to comply with in 40 CFR §§266.105, 266.106, and 266.107;

3. Those standards for particulate matter in 40 CFR 264.343(c) remain in effect for a Phase I source incinerator that elects to comply with the alternative to the

particulate matter standard under 40 CFR 63.1206(b)(14) and 63.1219(e); and

4. Those provisions that the Executive Director may apply in 30 TAC Chapter 305, Subchapters I and Q, on a case-by-case basis. The Executive Director may require a permittee or an applicant to submit information in order to establish permit conditions under §305.50(a)(15) or (16) and §305.127(1)(B)(iii) or (4)(A) (i.e., risk-based permit conditions).

For hazardous waste combustion units subject to regulation by 40 CFR Part 63, Subpart EEE, some of the information requested in Sections V.H and V.I. will not be applicable for new units or existing units which have submitted a Notification of Compliance in accordance with 40 CFR 63.1207(j) and 63.1210(d), received a Finding of Compliance pursuant to 40 CFR 63.1206(b)(3), and have the associated RCRA permit conditions removed from the permit. Information which is not applicable or no longer applicable should not be included in the Part B application. *[Please note that the TCEQ will require a Finding of Compliance be made prior to modifying the permit by deleting redundant operating parameter limits and standards for the combustion units. Until such time as the permit is modified to delete the redundant RCRA-based operating parameter limits and standards in the permit or the permit is terminated or revoked, the permittee must comply with the RCRA-based conditions specified in the permit. More stringent risk-based permit conditions will remain in the RCRA permit.]*

For the exceptions listed in Items 1.-4., the owner and operator must provide the applicable information requested in the Part B permit application and any additional information required by the Executive Director to establish permit conditions.

As applicable, provide an engineering report which includes all of the information specified in 30 TAC 305.171-305.176, 40 CFR 264.340, 264.342-264.346, 264.347(a), and 270.19. In addition, the Executive Director may require additional information to address the requirements in 30 TAC 305.50(a)(15).

Note: Please review the information provided in the section above entitled "Engineering Report for Combustion Units" and 40 CFR 270.19(e) to determine applicability of standards and associated requirements in 40 CFR Part 264, Subpart O. If the permit contains risk-based permit conditions, please ensure that all applicable supporting information is included in the engineering report.

1. Complete Table V.H.1 - Incinerators and list the incinerators covered by this application and list the waste managed in each unit.

2. Complete Table V.H.2 - Incinerator Permit Conditions, Monitoring, and Automatic Waste Feed Cutoff Systems for each Incinerator.

3. Complete Table V.H.3 - Maximum Constituents Feed Rate for each Incinerator.

4. Complete Table V.H.4 - Maximum Allowable Emission Rates for each Incinerator.

5. For use during the shakedown period, the trial burn period and the period after completion of the initial trial burn, complete Table V.H.5 - Incinerator Permit Conditions, Monitoring, and Automatic Waste Feed Cutoff-Short-Term Operation for each new or modified Incinerator.

6. If an incinerator will manage reactive or incompatible waste, as indicated on Table V.H.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17.

7. If an incinerator will manage F020, F021, F022, F023, F026, and F027 waste, as

indicated on Table V.H.1, the DRE requirement is 99.9999%.

8. If a trial burn for a modified unit and Comprehensive Performance Test under 40 CFR Part 63, Subpart EEE (HWC MACT) (for all new and modified units) will be performed, designate one or more of the 40 CFR 261 Appendix VIII organic compounds present in the wastes to be incinerated as Principal Organic Hazardous Constituents (POHCs). Selection will be based upon the degree of difficulty of incineration of these compounds and upon their concentration or mass in the waste feed. These POHCs will be used to determine the destruction and removal efficiency (DRE) specified in the performance standards of 40 CFR 264.343 and HWC MACT. In addition, complete Table V.H.8 - Principal Organic Hazardous Constituents.

9. Submit a Quality Control/Quality Assurance Plan for all sampling, analysis, and monitoring activities which will occur in conjunction with the trial burn.

10. As applicable, facilities with existing permits may request that the Executive Director to address permit conditions that minimize emissions from startup, shutdown, and malfunction events in accordance with the options under 40 CFR 270.235 when requesting the removal of permit conditions that are no longer applicable according to 30 TAC 305.175. Please provide the relevant information needed to process the requested option to minimize emissions identified in 40 CFR 270.235(1)(a)(i)-(iii). (30 TAC 305.176)

I. Boilers and Industrial Furnaces

Not Applicable

Engineering Report for Combustion Units

For hazardous waste combustion unit which are subject to regulation by 40 CFR Part 63, Subpart EEE, the requirements 30 TAC Chapter 305 and Subchapters I and Q do not apply when the unit becomes subject to Resource Conservation and Recovery Act (RCRA) permit requirements after October 12, 2005 (i.e., new unit), or no longer apply when an owner or operator of an existing hazardous waste management unit demonstrates compliance with the air emission standards and limitations in 40 Code of Federal Regulations (CFR) Part 63, Subpart EEE, except for the following:

1. Those provisions the Executive Director determines are necessary to comply with 40 CFR §264.345(a) and 40 CFR §264.345(c) for Phase I sources or 40 CFR §266.102(e)(1) and (2)(iii) for Phase II sources if the permittee or applicant elects to comply with any of the options listed in 40 CFR §270.235(a) to minimize emissions of toxic compounds from startup, shutdown, and malfunction events;

2. Those standards and associated requirements for particulate matter, hydrogen chloride and chlorine gas, and non-mercury metals that a Phase II area source elects to comply with in 40 CFR §§266.105, 266.106, and 266.107;

3. Those standards for particulate matter in 40 CFR 264.343(c) remain in effect for a Phase I source incinerator that elects to comply with the alternative to the particulate matter standard under 40 CFR 63.1206(b)(14) and 63.1219(e); and

4. Those provisions that the Executive Director may apply in 30 TAC Chapter 305, Subchapters I and Q, on a case-by-case basis. The Executive Director may require a permittee or an applicant to submit information in order to establish permit conditions under §305.50(a)(15) or (16) and §305.127(1)(B)(iii) or (4)(A) (i.e., risk-based permit conditions).

For hazardous waste combustion units subject to regulation by 40 CFR Part 63, Subpart EEE, some of the information requested in Sections V.H and V.I. will not be applicable for new units

or existing units which have submitted a Notification of Compliance in accordance with 40 CFR 63.1207(j) and 63.1210(d), received a Finding of Compliance pursuant to 40 CFR 63.1206(b)(3), and have the associated RCRA permit conditions removed from the permit. Information which is not applicable or no longer applicable should not be included in the Part B application. *[Please note that the TCEQ will require a Finding of Compliance be made prior to modifying the permit by deleting redundant operating parameter limits and standards for the combustion units. Until such time as the permit is modified to delete the redundant RCRA-based operating parameter limits and standards in the permit or the permit is terminated or revoked, the permittee must comply with the RCRA-based conditions specified in the permit. More stringent risk-based permit conditions will remain in the RCRA permit.]*

For the exceptions listed in Items 1.-4., the owner and operator must provide the applicable information requested in the Part B permit application and any additional information required by the Executive Director to establish permit conditions.

As applicable, provide an engineering report which includes all of the information specified in 30 TAC 305.50(a)(13), 305.571-573, 40 CFR 266.100 and 266.102 (as incorporated by reference in 30 TAC 335.221 through 335.225), 266.104-266.112, and 270.22. In addition, the Executive Director may require additional information to address the requirements in 30 TAC 305.50(a)(15).

Note: Please review the information provided in the section above entitled "Engineering Report for Combustion Units" and 40 CFR 270.22 to determine applicability of standards and associated requirements in 40 CFR Part 266, Subpart H. Area sources that elect to comply with the standards and associated requirements of 40 CFR 266.105, 266.106, and 266.107 should address those elected standards and requirements in the engineering report. If the permit contains risk-based permit conditions, please ensure that all applicable supporting information is included in the engineering report.

1. Complete Table V.I.1 - Boilers and Industrial Furnaces and list the boilers and/or industrial furnaces covered by this application to be permitted and list the waste managed in each unit.
2. Complete Table V.I.2 - Boiler and Industrial Furnace Permit Conditions, Monitoring, and Automatic Waste Feed Cutoff Systems for each unit.
3. Complete Table V.I.3 - Maximum Constituent Feed Rate for each unit.
4. Complete Table V.I.4 - Maximum Allowable Emission Rates for each unit.
5. For use during the shakedown period, trial burn period and the period after completion of the initial trial burn, complete Table V.I.5 - Boiler and Industrial Furnace Permit Conditions, Monitoring, and Automatic Waste Feed Cutoff Systems-Short-Term Operation for each new or modified unit.
6. If a boiler or industrial furnace will manage reactive or incompatible waste, as indicated on Table V.I.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17.
7. If a boiler and industrial furnace will manage F020, F021, F022, F023, F026, and F027 waste, as indicated on Table V.I.1, the DRE requirement is 99.9999%.
8. If a trial burn for modified units and Comprehensive Performance Test under 40 CFR Part 63, Subpart EEE (HWC MACT) (for all new and modified units) will be performed, designate one or more of the 40 CFR 261 Appendix VIII organic compounds present in the wastes to be incinerated as Principal Organic Hazardous Constituents (POHCs). Selection will be based upon the degree of difficulty of incineration of these compounds and upon their concentration or mass in the waste feed. These POHCs will be used to determine the destruction

and removal efficiency (DRE) specified in the performance standards of 40 CFR 266.104 and HWC MACT. In addition, complete Table V.I.8 - Principal Organic Hazardous Constituents.

9. Submit a Quality Control/Quality Assurance Plan for all sampling, analysis, and monitoring activities.

10. As applicable, facilities with existing permits may request that the Executive Director to address permit conditions that minimize emissions from startup, shutdown, and malfunction events in accordance with the options under 40 CFR 270.235 when requesting the removal of permit conditions that are no longer applicable according to 30 TAC 305.571(b). Please provide the relevant information needed to process the requested option to minimize emissions identified in 40 CFR 270.235(1)(a)(i)-(iii). [30 TAC 305.572(a)(6)]

J. Drip Pads

Not Applicable

Provide an engineering report which includes all of the information specified in 40 CFR 264.570-573 and 270.26

1. Complete Table V.J.1. - Drip Pads and list the drip pads, covered by this application, to be permitted. List the N.O.R. unit number, the waste managed in each unit, the rated capacity of each unit, and the overall dimensions of the unit (including perimeter curb or berm height) that will be in contact with the waste.

2. For either new drip pads or existing drip pads for which the owner/operator elects to comply with the synthetic liner requirement of 40 CFR 264.573(b), please complete Table V.J.2. - Drip Pad Synthetic Liner System.

3. In the engineering report, describe the design, installation, construction, and operation of the liner and leakage collection system. The description must demonstrate that the liner system will prevent discharge to the land, groundwater, and surface water. The following analyses should be included as attachments to the engineering report (A QAPP should be included in the report to ensure that each analysis is performed appropriately):

For artificial liners:

a. Seaming method
b. Surface preparation method
c. Tensile Strength
d. Impact Resistance
e. Compatibility Demonstration
f. Foundation Design (including Settlement Potential, Bearing Capacity and Stability, and Potential for Bottom Heave Blow-out)

For Leakage Collection System

g. Capacity of the system:
   (1) rate of leachate removal
   (2) capacity of sumps
   (3) thickness of mounding and maximum hydraulic head
h. Pipe Material and Strength
i. Pipe Network Spacing and Grading

j. Collection Sump(s) Material and Strength

k. Drainage Media Specifications and Performance

l. Analyses showing that pipe and pipe perforation size will prevent clogging and allow free liquid access to the pipe.

m. Compatibility Demonstration

K. Miscellaneous Units

Not Applicable

A miscellaneous unit is a unit other than a container, tank, incinerator, boiler, industrial furnace, landfill, surface impoundment, waste pile, underground injection well, land treatment area, drip pad, or unit eligible for an R, D & D permit that is used to process, store, or dispose of hazardous waste.

For each miscellaneous unit for which an operating permit is sought, provide an engineering report which includes all of the information specified in 40 CFR 264.600-264.602, and 270.23.

1. Complete Table V.K - Miscellaneous Units and list the miscellaneous units covered by this application. List the waste managed in each unit and the rated capacity or size of the unit. If the information requested is not applicable, an explanation must be submitted.

2. Provide any other information which is descriptive of the relationship between the miscellaneous unit and the environment. Application information may include design requirements of 30 TAC 305 and 335, 40 CFR Part 264 Subparts I through O, and Part 270 that are appropriate for the miscellaneous unit or portions of the unit being permitted.

3. For a unit which involves combustion, please provide emissions data or a trial burn plan. Tables V.H.1-5 for incinerators or Tables V.I.1-5 for boilers and industrial furnaces may be adapted as appropriate to provide operation, monitoring, and emission information for a miscellaneous combustion unit.

L. Containment Buildings

Not Applicable

Complete Table V.L. - Containment Buildings and list the containment buildings covered by this application to be permitted. List the N.O.R. unit number, whether the unit is for storage and/or processing, the waste or debris managed in each unit, the rated capacity of each unit, and the overall dimensions of the unit (including containment wall height) that will be in contact with the waste or debris.

VI. Geology Report

Provide all Part B responsive information in Appendix VI. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

This portion of the application applies to owners or operators of new hazardous waste management facilities; areal and/or capacity expansions of existing hazardous waste management facilities; and existing industrial solid waste facilities that store, process or dispose of hazardous waste in surface impoundments, landfills, land treatment units, waste piles (except those waste piles that meet the requirements of Section V.E.10.b. of this application), and tanks or drip pads which require a contingent post-closure plan.

For a new Compliance Plan or modification/amendment to an existing Compliance Plan of Section XI of this application, submit a Geology Report which contains updated site geologic information derived from on-going investigations since submittal of the last Permit modification/amendment application.

Submit a Geology Report which includes at a minimum the following information. This report and all specifications, details, calculations/estimates and each original sheet of plans, drawings, maps, cross-sections, other graphics, such as limits of contamination maps, etc. or any other geoscientific work must be signed and sealed by a Professional Geoscientist licensed in the State of Texas under the Professional Geoscientists Practice Act.

The Geology Report submitted with the August 2014 Part B application is provided in Appendix VI. The subsidence section of the report has been updated with current data from the Harris-Galveston Subsidence District website, including annual groundwater reports.

A. Geology and Topography

1. Active Geologic Processes **See Appendix VI.**

Provide a description and interpretation of the active geologic processes in the vicinity of the facility. This description should include:

a. An identification of any faults (active or otherwise) in the area of the facility. The preparer should determine which Holocene sediments or man-made structures have been displaced. The report should contain a description of the investigation techniques used to identify faults and should assess the degree, if any, to which a particular fault increases the long-term potential for waste migration. The clearance required from active faults to ensure that liner systems will not be disrupted will be based upon site specific factors such as the zone of significant surface deformation, uncertainty in locating the fault, activity of the fault, and a distance to provide a reasonable margin of safety. These issues should be addressed when discussing the offset of an industrial solid waste facility unit from an active fault.

To satisfy the requirements of 30 TAC 305.50(a)(4)(D) and 305.50(a)(10)(E), for a proposed hazardous waste management facility or a modification or amendment of a permit which includes a capacity expansion of an existing hazardous waste management facility, submit the following. **Not Applicable**

(1) A geologic literature review should be conducted, from which useful information on the possibility of faulting at a given site may be revealed. This includes, but is not limited to, maps of surface faults, subsurface structure, and field investigations by the author(s).

(2) Descriptions and maps of faulting, fracturing, and lineations in the area are necessary. An aerial photo with lineation

interpretations is suggested.

(3) The maps and cross-sections are to be constructed using an amount of data necessary to adequately describe the geology of the area. Surface data, including data regarding known surface expressions, such as surface faults, gas seeps, lineations, etc., should be accounted for in the subsurface interpretations. A surface structure map should be prepared, incorporating all of the subsurface data as well as known surface features.

(4) A minimum of two structural cross-sections, utilizing available oil field and/or water well electric log data, shall be made perpendicular to each other, crossing at the proposed surface unit location. These cross-sections should define geologic units, indicating especially Holocene sediments and Underground Sources of Drinking Water (USDWs), as well as lithology. The cross-sections should be constructed from the surface, down through the shallowest major structure or the base of the Holocene, whichever is deeper. These cross-sections need to be on a scale necessary to depict the local geology (3000' radius from the site location minimum). If needed to adequately describe the local geology, then a larger radius or deeper area of review may be necessary.

(5) A minimum of two structural subsurface maps need to be prepared. One map should be made on the shallowest mappable subsurface marker, the other on a deeper horizon that shows the underlying major structure. Additional maps may be necessary.

(6) Field surveillance will be necessary to check the area of the facility for surface features, such as lineations, and to investigate potential surface faults as indicated by, but not limited to, aerial photos, topographic maps, and seismic and subsurface structural maps.

(7) The above requirements do not limit the use of any additional information, such as seismic data, isopach maps, or potentiometric maps, that may help in defining the geology of the area of review.

(8) If faulting exists within 3000 feet of the surface unit, it must be demonstrated that the fault has not had displacement within Holocene time. If such a fault does exist, it cannot pass within 200 feet of the surface unit.

(9) If a fault that has been active within the Holocene is located within 3000 feet of the surface unit, it must be demonstrated that, a.) the fault is not transmissive, i.e., it will not provide for groundwater movement that would result in endangerment to human health or the environment, and b.) there is no actual and/or potential problem of subsidence, which could endanger the stability of the surface unit.

b. A discussion of the extent of land surface subsidence in the vicinity of the facility including total recorded subsidence and past and projected rates of subsidence. For facilities located at low elevations along the coast which have experienced appreciable rates of subsidence, the potential for future submergence beneath Gulf water should be addressed. **See Appendix VI.**

c. A discussion of the degree to which the facility is subject to erosion. The potential for erosion due to surface water processes such as overland flow, channeling, gullying, and fluvial processes such as meandering streams and undercut banks should be evaluated. If the facility is located in a low-lying coastal area, historical rates of shoreline erosion should also be provided.

See Appendix VI.

d. Complete Table VI.A.1. - Major Geologic Formations **Table VI.A.1 is included in Appendix VI.**

2. **Applicable to Land Based Units Only.** Regional Physiography and Topography (applicable only to owners or operators of facilities that store, process, or dispose of hazardous waste in surface impoundments, landfills, land treatment units, waste piles, except waste piles exempt from groundwater monitoring requirements, and tanks which require a contingent post-closure plan) **See Appendix VI.**

    a. Distance and direction to nearest surface water body
    b. Slope of land surface
    c. Direction of slope
    d. Maximum elevation of facility
    e. Minimum elevation of facility

3. **Applicable to Land Based Units Only.** Regional Geology (applicable only to owners or operators of facilities that store, process, or dispose of hazardous waste in surface impoundments, landfills, land treatment units, waste piles, except waste piles exempt from groundwater monitoring requirements, and tanks which require a contingent post-closure plan) **See Appendix VI.**

    Provide a description of the regional geology of the area. This section should include:

    a. A geologic map of the region with text describing the stratigraphic and lithologic properties of the map units. An appropriate section of a published map series such as the Geologic Atlas of Texas prepared by the Bureau of Economic Geology is acceptable.

    b. A description of the generalized stratigraphic column in the facility area from the base of the lowermost aquifer capable of providing usable groundwater to the land surface. At least the uppermost 1,000 feet of section below the facility should be described. The geologic age, lithology, variation in lithology, thickness, depth, geometry, hydraulic conductivity, and depositional history of each geologic unit should be described based upon available geologic information. Regional stratigraphic cross sections should be provided, where available.

4. Subsurface Soils Investigation Report **(Applicable to land based units or units requiring contingent closure and post-closure).** See Appendix VI.

This section should contain the results of an investigation of subsurface conditions for each land based unit and/or unit which requires contingent closure and post-closure care. If several units are in close proximity, a single investigation for the area will suffice. This report should include:

a. The logs of borings performed at the waste management area. All borings must be conducted in accordance with established field exploration methods. Investigation procedures should be discussed in the report. A sufficient number of borings should be performed to establish subsurface stratigraphy and to identify and allow assessment of potential pathways for pollution migration. Borings must be sufficiently deep to allow identification of the uppermost aquifer and underlying hydraulically interconnected aquifers. Borings should penetrate through the uppermost aquifer and all deeper hydraulically interconnected aquifers, deep enough to identify the aquiclude at the lower boundary. Borings should be completed to a depth at least 30 feet below the deepest excavation planned at the waste management area.

b. A text which describes the investigator's interpretations of the subsurface stratigraphy based upon the field investigation. If appropriate, soils may be assigned to generalized strata to aid in the discussion.

c. A text which describes the investigator's interpretations of the subsurface stratigraphy based upon the field investigation. If appropriate, soils may be assigned to generalized strata to aid in the discussion.

d. Complete Table VI.A.4. - Waste Management Area Subsurface Conditions and provide in the report data which describes the geotechnical properties of the subsurface soil materials. All laboratory and field tests must be performed in accordance with recognized procedures. A brief discussion of test procedures should be included. All major strata encountered during the field investigation phase should be characterized with regard to: Unified Soil Classification, moisture content, percent less than number 200 sieve, Atterberg limits (liquid limit, plastic limit, and plasticity index), and coefficient of permeability. Field permeability tests should be used to determine the coefficient of permeability of sand or silt units and should also be used to supplement laboratory tests for more clay-rich soils. In addition, particle size distribution and relative density based upon penetration resistance should be determined for coarse-grained soils. For fine-grained soils the following parameters should also be determined: cohesive shear strength based upon either penetrometer or unconfined compression tests, dry unit weight, and degree of saturation(s). For the major soil strata encountered, the maximum, minimum, and average for each of these variables should be compiled. **Table VI.A.4 is included in Appendix VI.**

e. For land treatment units, provide a description of the surficial soils at the site which includes:

(1) The name and description of the soil series at the site;
(2) Important physical properties of the series such as depth, permeability, available water capacity, soil pH, and erosion factors;
(3) Engineering properties and classifications such as USDA texture, Unified Soil Classification, size gradation, and Atterberg limits (liquid limit, plastic limit, and plasticity index); and
(4) The cation exchange capacity (CEC) of the soil(s) expressed in units of meq/100g.

Much of this information may be obtained by consulting the county soil survey published by the United States Department of Agriculture, Soil Conservation Service. If available, a copy of an aerial photograph showing soil series units on the land treatment area should be provided.

If an aerial photograph is not available, include a soil series map as an attachment to this subsurface soils investigation report.

B. Facility Groundwater

If past monitoring has shown the presence of hazardous constituents in the groundwater, the owner or operator must submit a Compliance Plan Application with this application. The Compliance Plan Application and instructions can be found in Section XI of this application form. **Hazardous constituents have been detected in groundwater. See Section XI for the Compliance Plan renewal application.**

1. Regional Aquifers **See Appendix VI.**

Provide a description of the regional aquifers in the vicinity of the facility based upon available geologic references. The section should provide:

a. Aquifer names and their association with geologic units described in Section VI.A.3.b.;

b. A description of the constituent materials of the aquifer(s);

c. A description of the water-bearing and transmitting properties of the aquifer(s);

d. Whether the aquifers are under water table or artesian conditions;

e. Whether the aquifers are hydraulically connected;

f. A regional water table contour map or potentiometric surface map for each aquifer, if available, from published references;

g. An estimate of the rate of groundwater flow in units of ft/yr;

h. Values for total dissolved solids content of groundwater from the aquifers;

i. Identification of areas of recharge to the aquifers; and

Note: An application for a new hazardous waste surface impoundment, waste pile, land treatment unit, or landfill, which is to be located in the apparent recharge zone of a major or minor aquifer, as designated by the Texas Water Development Board, must include a hydrogeologic report documenting the potential effects, if any, on the regional aquifer in the event of a release from the waste containment system. See the publication entitled Water for Texas, Today and Tomorrow (1990) or subsequent revision (Available at **http://www.twdb.texas.gov/waterplanning/swp/1990/index.asp**) for more information [30 TAC 305.50(6)]

j. The present use of groundwater withdrawn from aquifers in the vicinity of the facility.

The preparer should update Section III.C.1.e. of the Part A permit application to ensure that all water wells within 1 mile of the property boundaries of the facility have been located. The aquifer(s) yielding water should be identified for each well.

2. Provide groundwater conditions for each land based unit or unit which requires post closure care which includes all the information specified in 30 TAC 335.156-335.167. This discussion should also include:

See Appendices VI and XI..

a. Records of water level measurements in borings. The boring logs prepared in response to Section VI.A.4.a. should be annotated to note the level at which groundwater is first encountered and the level of groundwater after equilibration. Normally a 24-hour period is adequate for equilibration of groundwater but an extended period may be required for saturated clay deposits. This information should also be presented on the cross-sections required in Section VI.A.4.b. and recorded and retained in the facility groundwater monitoring record.

b. Records of historical maximum and minimum static water level measurements in monitor wells. Historic water level measurements made during any previous groundwater monitoring should be presented in a table for each well.

c. Upper and lower limits of the uppermost aquifer and deeper aquifers which are hydraulically interconnected to it beneath the facility boundary. In most cases this identification would include surface contour maps of the top and bottom surfaces. Indicate the typical depth at which groundwater is first encountered.

d. A site specific water table contour map or potentiometric surface map for the uppermost aquifer, and the basis for such identification (the information obtained from hydrogeologic investigations of the facility area). The predicted groundwater flow direction and rate should be indicated.

e. A discussion of the variation of hydraulic gradient across the site, including vertical gradient. Calculations for the maximum, minimum, and average groundwater flow velocities for each aquifer identified should also be provided, including pump test data where appropriate.

f. An analysis of the most likely pathway(s) for pollutant migration in the event that the primary barrier liner system is penetrated.

3. Description of the Detection Monitoring Program

Not applicable. The Moat is monitored in accordance with a Compliance Monitoring Program and the Stormwater Pond and Bauxite Pond (Ponds Waste Management Area) are monitored in accordance with a Corrective Action Monitoring Program. See Section XI of this application.

It is important to note that even if the proposed program may use the same well system as the present program, the sampling parameters may be different.

a. Include in the design report a description of the proposed detection monitoring program. This description should contain all requirements of 30 TAC 335.163-335.164.

b. Provide a justification for the selected suite of waste specific parameters specified in Table VI.B.3.c. - Groundwater Sample Analysis based on toxicity, mobility, persistence, and concentrations in light and dense non-aqueous phase components of the waste.

c. (Sampling and Analysis Plan) Describe the proposed sampling and analysis methods, as well as statistical comparison procedures to be utilized in evaluating groundwater monitoring data. Note: Methods listed for use in groundwater programs may provide flexibility allowing for updates of the base method. For methods other than the standard acceptable methods, applicant must provide a demonstration that the proposed methods are appropriate for groundwater analysis per 30 TAC 335.163(5).

d. Specify the statistical method and process for determining whether constituent concentrations in groundwater are above background, in accordance with 30 TAC 335.163. Refer to the EPA guidance document entitled Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities - Unified Guidance (March 2009) (document # EPA 530-F-09-020) for recommended methods.

   All data submitted to the TCEQ shall be in a manner consistent with the latest version of the "*Quality Assurance Project Plan for Environmental Monitoring and Measurement Activities Relating to the Resource Conservation Recovery Act and Underground Injection Control*" (TCEQ QAPP) which a can be found on the agency's website.

   Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity. The method used to obtain a representative sample of the material to be analyzed shall be the appropriate method from ***Ground Water, Volume II: Methodology***, (document # EPA/625/6-90/016b) or an equivalent method approved by the Executive Director of the TCEQ. Laboratory methods shall be those specified in ***Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846***, 1987, as revised; ***Standard Methods for the Examination of Water and Wastewater, Fifteenth Edition***, 1980, and 1981 supplement, or current adopted edition; ***RCRA Ground-Water Monitoring: Draft Technical Guidance***, 1992, ***OSWER Directive 9950.1***, or an equivalent method approved in writing prior to use by the Executive Director. [30 TAC Section 305.125(11)(A)]

e. For inclusion into a permit, complete Table VI.B.3.b. - Unit Groundwater Detection Monitoring System to specify the proposed well system for each unit or waste management area which requires groundwater monitoring.

f. For inclusion into a permit, complete Table VI.B.3.c to specify:

(1) the suite of waste specific parameters (indicator parameters, waste constituents, or reaction products) which will be analyzed at each sampling event for each well or group of wells. These parameters must provide a reliable indication of the presence of hazardous constituents in the groundwater;

(2) the sampling frequencies and calendar intervals (e.g., monthly; quarterly within the second 30 days of each quarter; semiannually within the first 30 days of the 2nd and 4th quarters, etc.);

(3) the analytical method and the laboratory predicted detection limit and predicted Practical Quantification Limit (PQL) of the sample preparation and analysis methods for the selected parameters. This detection limit will represent the capability of the sampling and analysis to reliably and accurately determine the presence of the selected parameters in the sample; and

(4) the concentration limit which will be the basis for determining whether a release has occurred from the waste management unit/ area. Concentration limits shall be based on background values for the waste management unit/area, or PQL values developed through laboratory data obtained using practices consistent with the latest version of the TCEQ QAPP. If background values are lower than PQLs, the applicant may choose respective PQLs as concentration limits for hazardous constituents.

g. Submit drawings depicting the monitoring well design, current and proposed.

h. Submit at least one map of the entire facility and additional maps or drawings if necessary on one or more 8.5" x 11" sheets of sufficient scale to show the following in adequate detail:
   (1) Monitoring well locations, current and proposed;
   (2) Soil-pore liquid and core sampling points, current and proposed;
   (3) Waste management unit(s)/area;
   (4) Property boundary;
   (5) Point of compliance;
   (6) Direction of groundwater flow; and
   (7) Extent of any known plume of contamination

i. For the description of site-specific groundwater for inclusion in permit summary documents, please complete the following:

Table VI.A.2. Description of Uppermost Aquifer

C. Exemption from Groundwater Monitoring for an Entire Facility

Not Applicable

In accordance with 30 TAC 335.156(b)(4), a waste management facility may be exempt from groundwater monitoring if the owner or operator can demonstrate that there is no potential for migration of liquid from any regulated unit to the uppermost aquifer during the active life of the regulated unit (including the closure period) and post-closure care period. This demonstration must be submitted with the permit application, and must be certified by a qualified geologist or geotechnical engineer.

This exemption does not apply to Unsaturated Zone Monitoring. Owners and operators of Land Treatment Units must monitor the unsaturated zone under all circumstances.

The following areas should be addressed in the demonstration, and any predictions must be made on assumptions that maximize the rate of liquid migration:

1. Thickness of soil between the base of the unit and saturated zone;
2. Thickness of saturated zone;
3. Head pressure of the fluids;
4. Properties of the saturated and unsaturated zone (including permeability, effective porosity, and homogeneity), and
5. Total life of facility

The criteria used for the evaluation of this demonstration are more stringent than those used for evaluations of demonstrations submitted prior to permitting. Thus it is necessary for an owner or operator to submit another demonstration even if one was submitted and approved previously.

This type of exemption differs from the exemptions described in Sections V.D. (Surface Impoundments), V.E. (Waste Piles), and V.G. (Landfills). An owner or operator may pursue a facility-wide exemption as well as an exemption for a particular unit, if the owner or operator wishes.

D. Unsaturated Zone Monitoring

Not Applicable

1. List all hazardous constituents that have been or will be monitored.
   a. Current parameters.
   b. Proposed parameters.
2. Number of soil-pore liquid sampling points.
   a. Depth of sampling points.
   b. Equipment used for soil pore liquid monitoring.
3. Number of soil core sampling points.
   a. Depth of soil core sampling points.
   b. Indicate on a facility map locations of all sampling points.

VII. Closure and Post-Closure Plans

Provide all Part B responsive information in Appendix VII. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

For multiple units provide an include all Part B responsive information in a separate Appendix for each unit.

Submit a full closure plan and post-closure plan, if applicable, which contains all the information required by 30 TAC 335.8, 335.169, 335.172, 335.174, 335.177, 335.178, 335.551-335.569, 30 TAC Chapter 350, 40 CFR 264.112, 264.118, 264.178, 264.197, 264.228, 264.258, 264.280, 264.310, 264.351, 264.575, 264.601, 264.603, 264.1102, 270.14(b)(13), 270.17(f), 270.18(h), 270.20(f), 270.21(e), 270.23(a)(2) & (3), and 270.26(c)(16) where applicable. The owner of property on which an existing disposal facility is located must also submit documentation that a notation has been placed in the deed to the facility that will in perpetuity notify any potential purchasers of the property that the land has been used to manage hazardous wastes and its use is restricted (see 30 TAC 335.5). For hazardous waste disposal units that were closed before submission of the application, the applicant should submit documentation to show that plats and notices required under 40 CFR 264.116 and 264.119 have been filed.

This renewal application addresses closure of the interim closed Stormwater Pond (NOR 002) and post-closure care of the closed Moat (NOR 001) and closed Bauxite Pond (NOR 007). Copies of the deed recordation documents for the Stormwater Pond, Moat, and Bauxite Pond are provided in Appendix II.G.6.

A. Closure

This section applies to the owners and operators of all hazardous waste management facilities to be permitted. The applicant must close the facility in a manner that minimizes need for further maintenance and controls, or eliminates, to the extent necessary to protect human health and the environment, the post-closure release of hazardous waste, hazardous constituents, leachate, contaminated rainfall, or waste decomposition products to the groundwater, surface waters, or to the atmosphere.

The facility type and type of unit to be closed can determine the level of detail sufficient for a closure plan.

For each unit to be permitted, complete Table VII.A. - Unit Closure and list the facility components to be decontaminated, possible methods of decontamination, and possible methods of disposal of wastes and waste residues generated during unit closure. All ancillary components must be included in calculating closure cost estimates.

The Stormwater Pond (NOR 002) is interim closed. Table VII.A is provided in Appendix VII.A.

Additionally, if the applicant plans to close a surface impoundment in accordance with 30 TAC 335.169(a)(1) and the impoundment does not comply with the liner requirements of 30 TAC Section 335.168(a) then the closure plan for the impoundment must include both a plan for complying with 30 TAC 335.169(a)(1) and a contingent plan for complying with 30 TAC 335.169(a)(2).

The closure plan for the Stormwater Pond from the Part B application dated May 15, 2000 is included in Appendix VII.A. Conceptual plan view and cross-sectional drawings of the Stormwater Pond cap and cover are provided in Appendix VII.A.

Guidance on design of a closure cap and final cover for landfills is given in TCEQ Technical Guideline No. 3, and EPA publication 530-SW-85-014 presents guidance on construction quality assurance of liner construction.

If a waste pile does not comply with the liner requirements of 30 TAC Section 335.170(a)(1) then the closure plan for the waste pile must include both a plan for complying with 40 CFR 264.258(a) and a contingent plan for complying with 40 CFR 264.258(b).

The final certification of closure of a land treatment unit may be prepared by an independent licensed Professional Geoscientist in lieu of an independent licensed Professional Engineer. [30 TAC 335.172(b)]

B. Closure Cost Estimate (including contingent closure) [30 TAC 335.178, 40 CFR 264.142]

This section applies to owners or operators of all hazardous waste facilities, except state and federal agencies. A detailed estimate, in current dollars, of the cost of closing the facility should be included in the report. The cost estimate must include the cost of closure at the point in the facilities operating life when the extent and manner of its operation would make closure the most expensive. The TCEQ has published Technical Guideline No. 10, Closure and Post-Closure Cost Estimates, for calculating closure costs which should be consulted. Closure costs should be developed on the basis of abandonment of the site at full capacity and closure activities to be conducted by a third party with no operable on-site equipment. The costs for closing each unit must be detailed.

An updated closure cost estimate for the Stormwater Pond is provided in Appendix VII.B, Table VII.B. Closure costs are based on estimates for a third party to complete final closure at the point in the facility's active life when the extent and manner of its operation would make closure most expensive.

1. If closure costs are based on contractor bids, the applicant should submit a copy of the bid specification and each contractor's response.

2. If closure costs are based on a detailed analysis, the applicant should submit details of item costs and number of each item, and details of costs for equipment rental, third party labor and supervision, transportation, analytical costs, etc. Provide an itemized cost on Table VII.B. - Unit Closure Cost Estimate for a complete, third party permitted facility closure. 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.

3. The closure plan may propose on-site disposal of wastes, residues, etc. during closure of a unit, and this may be executed if on-site capacity exists in other units during closure of a unit. However, the cost estimate for closure must be based on off-site shipment and disposal during closure of all wastes, waste residues, wastes generated by decontamination, contaminated stormwater, and leachate.

4. For each surface impoundment, waste pile, or tank system required to have a contingent closure plan, the cost for closure under the contingent closure plan should be detailed, as well as the cost of proposed closure. The more expensive of the cost of the proposed closure of a unit versus the cost of the

contingent closure of the unit should be used in the total facility closure cost estimate.

C. Post-closure

This section applies to owners or operators of all hazardous waste disposal facilities. This section also applies to certain waste piles, tanks and surface impoundments from which the owner or operator intends to remove wastes at closure but which are required to have contingent post-closure plans. **The post-closure care plan for the Stormwater Pond, Moat, and Bauxite Pond from the Part B application dated February 2001 is included in Appendix VII.C.**

For Landfills, and Waste Piles, Surface Impoundments, and Tanks Closed as a Landfill

1. Provide as-built plans and specifications for the final cover system, individually for each unit that is sealed, signed and dated by a licensed professional engineer with current Texas registration along with the Registered Engineering Firm's name and Registration Number would satisfy this requirement; Other as-built plans and specifications for the unit may be submitted upon request.
As-built plans and specifications are provided in Appendix V.D. The Stormwater Pond was closed with 3 feet of compacted clay cap and a minimum 1 foot compacted calcium sulfate cover. The Moat was closed with a cover system consisting of 4 feet of compacted clay cap and a 1.5 foot thick protective topsoil cover with grass. The Bauxite Pond was closed with a cover system consisting of 4 feet of compacted clay cap and a 2.5 foot thick protective topsoil cover with grass.

2. Complete the following tables, as applicable:

a. Complete Table VII.G - Post Closure Period.

Table VII.G is provided in Appendix VII.

b. Complete Table V.G.1 - Landfills and list the landfills (and number of cells, if applicable) covered by this application. List the waste(s) managed in each unit and the rated capacity or size of the unit. If wastes are segregated in some manner, list the cell number in which wastes are placed next to each waste type. **Not applicable.**

c. Table V.G.3. - Landfill Liner System and specify the type of liner used for the landfill. **Not applicable.**

d. Table V.G.4. - Landfill Leachate Collection System used for the landfill. **Not applicable.**

e. Table V.E.1 - Waste Piles and list the waste piles covered by this application. List the waste managed in each unit and the rated capacity or size of the unit. **Not applicable.**

f. Table V.E. 3 - Waste Pile Liner System and specify the type of containment/liner system. **Not applicable.**

g. Table V.D.1 - Surface Impoundments and list the surface impoundments, covered by this application, to be permitted. List the waste(s) managed in each unit and the rated capacity or size of each unit. **Table V.D.1 is provided in Appendix V.D.**

h. Table V.D. 6. - Surface Impoundment Liner System for each surface impoundment to be permitted. **Table V.D.6 is provided in Appendix V.D.**

i. Table V.C. Tanks and Tank Systems. **Not applicable.**

Post-closure care of each hazardous waste management unit must continue for 30 years after the date of completing closure of the unit and must consist of monitoring and reporting of the groundwater monitoring systems in addition to the maintenance and monitoring of waste containment systems. Continuation of certain security requirements may be necessary after the date of closure. Post-closure use of property on or in which hazardous waste remains after closure must never be allowed to disrupt the integrity of the containment system. In addition, submit the following information.

1. The post-closure care plan for a landfill or of a surface impoundment, waste pile, miscellaneous unit, or tank system closed with wastes or waste constituents left in place, or closed under a contingent closure plan, must demonstrate compliance with 30 TAC 335.174(b). **See Appendix VII.C**

2. The name, address, and phone number of the person or office to contact about the disposal facility during the post-closure period; and

   Joe Ebert, HSE Manager
   Pasadena Refining System, Inc.
   111 Red Bluff Road
   Pasadena, TX 77506
   713.472.2461
   713.472.4051; press 0 and request site permit contact

3. A discussion of the future use of the land associated with each unit.

   Future land use for the Stormwater Pond, Moat, and Bauxite Pond is industrial. Industrial land use will continue to support post-closure care activities at these units.

4. For landfills, surface impoundments, waste piles, and land treatment areas closed under interim status, submit the required documentation of 40 CFR 270.14(b)(14).

   Proof of deed recordation for the Stormwater Pond, Moat, and Bauxite Pond is provided in Appendix II.G.6. Certification of Closure for the Moat and the Bauxite Pond is provided in Appendix V.D.

5. Landfills, surface impoundments, waste piles and land treatment areas that received hazardous wastes after July 26, 1982 or for which closure was certified after January 26, 1983 must be included in post-closure care plans unless they have been determined to have closed by removal equivalent to the closure standards in 40 CFR 264 Subpart G. If such a demonstration has been made pursuant to 40 CFR 270.1(c)(5), but an equivalency determination has not been made, please submit a copy of the demonstration documentation. If an equivalency determination has been made pursuant to 40 CFR 270.1(c)(6), applicant should submit a copy of the determination. Complete Table VII.C.5. - Land-Based Units Closed Under Interim Status for all land based units closed under interim status.

   Table VII.C.5 is included in Appendix VII. The post-closure care plan is provided in Appendix VII.C.

D. Post-closure Cost Estimate [40 CFR 264.144]

This section regarding post-closure cost estimate applies to owners or operators of

all hazardous waste disposal facilities, except state and federal agencies, and certain waste piles, tank systems, and surface impoundments from which the owner or operator intends to remove wastes at closure, but which are required to have contingent closure and post-closure plans. A detailed estimate, in current dollars, of the annual cost of monitoring and maintenance of the facility in accordance with the applicable post- closure regulations must be included in the report. The TCEQ has published Technical Guideline No. 10 for calculating post-closure costs, which should be consulted. Costs should be developed in detail for 30 years of post-closure care activities to be conducted by a third party, for each applicable unit.

Updated post-closure cost estimates are provided in Appendix VII.D. Because these units are monitored under a Compliance Monitoring or Corrective Action program, groundwater monitoring costs have been incorporated into Table XI.E.2 of the Compliance Plan application (Section XI). Post-closure costs are based on the estimate for a third party to complete the post-closure care plan.

1. The applicant should submit details of item costs and number of each item for off-site disposal of leachate and bailed monitor well water, labor and supervision, monitor well sampling and analyses, inspection and repair of the cap(s), mowing and re-seeding of the vegetative cover, maintaining site security, etc. Provide an itemized cost estimate on Table VII.D. - Unit Post-Closure Cost Estimate for complete, third party permitted facility post-closure care.

   Table VII.D is provided in Appendix VII.D.

2. 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.

3. Total annual cost of post-closure care for the facility including costs of contingent post-closure care should be multiplied by 30 years.

E. Closure and Post-Closure Cost Summary

Please Complete Table VII.E.1. - Permitted Unit Closure Cost Summary

Please Complete Table VII.E.2. - Permitted Unit Post-Closure Cost Summary

Tables VII.E.1 (for the Stormwater Pond) and VII.E.2 (for the Stormwater Pond, Moat, and Bauxite Pond) are included in Appendix VII.E.

VIII. Financial Assurance

Provide all Part B responsive information in Appendix VI. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

A. Financial Assurance Information Requirements for all Applicants (30 TAC Chapter 37, Subchapter P, 305.50(a)(4)(A-E), 335.152(a)(6) and 335.179)

The current Financial Assurance Mechanism for the site (Corporate Guarantee for closure, post-closure, corrective action, and liability) is provided in Appendix VIII.A.

1. Financial Assurance for Closure

   An owner or operator must establish financial assurance for the closure of the facility no later than 60 days prior to the first receipt of waste [30 TAC Section 37.31(a)]. Please refer to 30 TAC Chapter 37, Subchapter P, for the financial assurance requirements for closure and provide a signed statement from an authorized signatory per 30 TAC 305.44 regarding how the owner or operator will comply with this provision.

   If a financial mechanism has been obtained, provide a copy of the mechanism.

   For applications involving a permit transfer, the new owner or operator must provide a financial assurance mechanism (in original form) satisfactory to the TCEQ executive director. Prior to the executive director issuing the permit modification transferring the permit, the new owner or operator must provide proof of financial assurance in compliance with 30 TAC Section 305.64 (g) and Chapter 37, Subchapter P.

2. Financial Assurance for Post-Closure Care (applicable to disposal facilities and contingent post-closure care facilities only)

   An owner or operator subject to post-closure monitoring or maintenance requirements must establish financial assurance for the post-closure care of the facility no later than 60 days prior to the first receipt of waste [30 TAC Section 37.31(a)]. Please refer to 30 TAC Chapter 37, Subchapter P for the financial assurance requirements for post-closure and provide a signed statement from an authorized signatory per 30 TAC 305.44 regarding how the owner or operator will comply with this provision.

   If a financial mechanism has been obtained, provide a copy of the mechanism.

   For applications involving a permit transfer, the new owner or operator must provide a financial assurance mechanism (in original form) satisfactory to the TCEQ executive director. Prior to the executive director issuing the permit modification transferring the permit, the new owner or operator must provide proof of financial assurance in compliance with 30 TAC Section 305.64 (g) and Chapter 37, Subchapter P.

3. Financial Assurance for Corrective Action

   An owner or operator must establish financial assurance for corrective action of the facility no later than 60 days after the permit or order requiring the corrective action financial assurance is signed by the executive director or commission [30 TAC Section 37.31(b)]. Please refer to 30 TAC Chapter 37, Subchapter P, for the financial assurance requirements for closure and provide a signed statement from an authorized signatory per 30 TAC 305.44 regarding how the owner or operator will comply with this provision and indicate below the type of financial assurance mechanism to cover corrective action for the

facility.

If a financial mechanism has been obtained, provide a copy of the mechanism.

For applications involving permit transfers, the new owner or operator must provide a financial assurance mechanism (in original form) satisfactory to the TCEQ executive director. Prior to the executive director issuing the permit modification transferring the permit, the new owner or operator must provide proof of financial assurance in compliance with 30 TAC Section 305.64 (g) and Chapter 37, Subchapter P.

4. Liability Requirements (not required for post-closure care)

All owners or operators must establish financial assurance for third party sudden liability coverage of the facility no later than 60 days prior to the first receipt of waste [30 TAC Section 37.31(a)]. Owners or operators of disposal facilities must establish financial assurance for third party sudden and nonsudden liability coverage of the facility no later than 60 days prior to the first receipt of hazardous waste. Please refer to 30 TAC Chapter 37, Subchapter P, for the financial assurance requirements for liability coverage, and provide a signed statement from an authorized signatory per 30 TAC 305.44 regarding how the owner or operator will comply with this provision.

If a financial mechanism has been obtained, provide a copy of the mechanism.

For applications involving a permit transfer, the new owner or operator must provide a financial assurance mechanism (in original form) satisfactory to the TCEQ executive director. Prior to the executive director issuing the permit modification transferring the permit, the new owner or operator must provide proof of financial assurance in compliance with 30 TAC Section 305.64 (g) and Chapter 37, Subchapter P.

B. Applicant Financial Disclosure Statements for a new permit, permit amendment, or permit modification, or permit renewal (30 TAC 305.50(a)(4))

Refer to the Supplemental Technical Information Guidance for Applicants Subject to Financial Capability Requirements, included in Section VIII.B., and the requirements listed below as you complete this section.

1. Provide information required in 30 TAC 305.50(a)(4), as applicable to the application request. **Not applicable. This is not an application for a permit, permit amendment, or permit modification to store, process, or dispose of hazardous waste.**

2. Complete Table VIII.B. if requesting capacity expansion or new construction. **Not Applicable**

3. For new commercial hazardous waste management facility applications, a written statement signed by an authorized signatory per 30 TAC 305.44 explaining how the applicant intends to provide emergency response financial assurance per 30 TAC 305.50(a)(12)(C) or (D). **Not applicable. This is not an application for a new commercial hazardous waste management facility.**

4. For renewal applications with no capacity expansion, please complete and submit the attached Financial Disclosure Letter. **The financial disclosure letter is provided in Appendix VIII.B.**

Information for Applicants Subject to Financial Capability Requirements

Certain applications involving Hazardous Waste facilities are subject to review of the

applicant's financial ability to construct, operate, and/or close the facility, perform post-closure care and corrective action at the facility in accordance with State law as specified in Section 361.085 of the Texas Health and Safety Code. TCEQ refers to these reviews as financial capability reviews. This document summarizes and clarifies the information required in an application to meet the TCEQ requirements of 30 Texas Administrative Code (TAC) 305.50.

Information requirements vary depending on the type of financial information available to applicants, primarily whether audited financial statements are available as well as the type of application submitted. For each scenario described below, financial information must be provided for the specific applicant.

I. New Facilities, Facility Expansions and Permit Transfers Not Applicable

A. Publicly traded Entities

1. Securities and Exchange Commission (SEC) Form 10-Ks

   This portion of the requirement calls for the two most recent 10-K reports filed.

2. SEC Form 10-Q

   This portion of the requirement calls for a copy of the most recent quarterly report.

3. Explanation statement

   This portion of the requirement calls for a statement signed by an authorized signatory [as described in 30 TAC 305.44(a)] explaining in detail how the applicant demonstrates sufficient financial resources to construct, safely operate, properly close, perform post-closure care, perform corrective action and provide adequate liability coverage for the facility. This statement must also address how the closure, post-closure, corrective action, and liability coverage financial assurance requirements of Chapter 37, Subchapter P will be met. (ie. which financial assurance mechanism is or will be used).

4. Construction capital cost estimates

   This portion of the requirement calls for estimates of capital costs for expansion and/or initial construction if the application encompasses facility expansion, capacity expansion, or new construction.

B. Privately held entities with audited financial statements

1. Audited financial statements

   This portion of the requirement calls for complete copies of the audited financial statements for each of the most recent two fiscal years. If an audit has not been completed for one of the previous two years, a complete copy of the fiscal year end financial statement and federal tax return may be substituted in lieu of the audit not performed. The tax return must be certified by original signature of an authorized signatory as being a "true and correct copy of the return filed with the Internal Revenue Service." Financial statements must be prepared consistent with generally accepted accounting principles and include a balance sheet, income statement, cash flow statement, notes to the financial statement, and an accountant's opinion letter.

2. Quarterly financial statement

   This portion of the requirement calls for a complete copy of the most current quarterly financial statement prepared consistent with generally accepted accounting principles. Internally prepared statements are satisfactory.

3. Supplementary information statement

   This portion of the requirement calls for a written statement detailing the information that would normally be found in SEC's Form 10-K including descriptions of the business and its operations; identification of any affiliated relationships; credit agreements and terms; any legal proceedings involving the applicant; contingent liabilities; and significant accounting policies.

4. Construction capital cost estimates

   This portion of the requirement calls for estimates of capital costs for expansion and/or initial construction if the application encompasses facility expansion, capacity expansion, or new construction.

5. Explanation statement

   This portion of the requirement calls for a statement signed by an authorized signatory [as described in 30 TAC 305.44(a)] explaining in detail how the applicant demonstrates sufficient financial resources to construct, safely operate, properly close, perform post-closure care, perform corrective action and provide adequate liability coverage for the facility. This statement must also address how the closure, post-closure, corrective action, and liability coverage financial assurance requirements of Chapter 37, Subchapter P will be met (ie. which financial assurance mechanism is or will be used).

C. Entities without audited financial statements or entities choosing not to provide the information listed above

1. Financial Plan

   This portion of the requirement calls for a financial plan (including balance sheets listing assets, liabilities and capital accounts) sufficiently detailed to clearly demonstrate that the applicant will be in a position to readily secure financing for construction, operation, and closure, post-closure, and corrective action if the permit is issued. At least 3 balance sheets should be included as of: a) approximately the date of the permit application, b) 12 months after any construction is completed (or assumption of operational control for a permit transfer), and c) 24 months after any construction is completed (or assumption of operational control for a permit transfer).

2. Letters of opinion

   The submitted financial plan must be accompanied by original letters of opinion from two financial experts, not otherwise employed by the applicant, who have the demonstrated ability to either finance the facility or place the required financing. If the permit action sought involves construction of a new facility or expansion of an existing facility, the opinion letters must certify that financing is obtainable within 180 days of permit approval and include the time schedule contingent upon permit finality for securing the financing as well as certify the financial plan is reasonable. Even if the application does not involve a facility or capacity expansion, the opinion letters must certify that the financial plan is reasonable. Only one opinion letter from a financial expert, not otherwise employed by the applicant, is required if the letter renders a firm commitment to provide all the necessary financing.

   Letters of opinion are usually issued by investment or commercial bankers but there could be additional sources. Applicants are encouraged to verify the adequacy of the credentials of their chosen financial expert with TCEQ's financial assurance unit prior to a formal engagement. Financial experts should describe their qualifications and disclose their independence from the applicant and/or any entity or person affiliated with the applicant.

3. Operating and cash flow statement

   This portion of the requirement calls for a written detail of the annual operating costs of the facility and a projected cash flow statement including the period of construction and first two years of operation. The cash flow statement must demonstrate the financial resources to meet operating costs, debt service, and provide financial assurance for closure, post-closure care, and liability coverage requirements. A list of the assumptions made to forecast cash flow must also be provided.

4. Explanation statement

   This portion of the requirement calls for a statement addressing how the closure, post-closure, corrective action, and liability coverage financial assurance requirements of Chapter 37, Subchapter P will be met (ie. which financial assurance mechanism is or will be used).

5. Construction capital cost estimates

   This portion of the requirement calls for estimates of capital costs for expansion and/or initial construction if the application encompasses facility expansion, capacity expansion, or new construction.

D. Entities with a resolution from a governing body approving or agreeing to approve the issuance of bonds to satisfy financial assurance requirements (e.g. a city or county)

1. Explanation statement

   This portion of the requirement calls for a statement signed by an authorized signatory [as described in 30 TAC30 305.44(a)] explaining in detail how the applicant demonstrates sufficient financial resources to construct, safely operate, properly close, perform post-closure, perform corrective action and provide adequate liability coverage for the facility. This statement must also address how the closure, post-closure, corrective action, and liability coverage

financial assurance requirements of Chapter 37, Subchapter P will be met (ie. which financial assurance mechanism is or will be used).

2. Certified copy of the resolution from the governing body.

3. Certification by the governing body of passage of the resolution.

II. Permit Renewals

Complete the **Financial Disclosure Letter** letter with applicable information inserted into the parentheses. *Note that additional information must be provided if requested by TCEQ.*

The financial disclosure letter is provided in Appendix VIII.B.

IX. Releases from Solid Waste Units and Corrective Action

Provide all Part B responsive information in Appendix IX. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

The Texas Solid Waste Disposal Act, 30 TAC 335.167, 40 CFR 270.14(d) and Section 3004(u) of the Hazardous and Solid Waste Amendments of 1984 (HSWA) *require that each hazardous waste management permit application review shall address corrective action for all releases of hazardous waste and hazardous constituents* listed in 40 CFR 261, Appendix VIII, 40 CFR Part 264, Appendix IX, and/or other constituents of concern from any solid waste management unit (SWMU) and/ or Areas of Concern (AOCs) at a facility, regardless of the time at which waste was placed in such unit[2]. For the purposes of HSWA Corrective Action, a SWMU may include, but is not limited to, any landfill, surface impoundment, land treatment unit, waste pile, underground injection well, incinerator, boiler, industrial furnace, tank, container storage area, drip pad, containment building, miscellaneous unit; any units exempt from hazardous waste permitting requirements, such as wastewater treatment units, elementary neutralization units, totally enclosed treatment units, waste recycle/reuse units, and 90-day accumulation time units; or process units or areas which may have routine and/or systematic releases to the environment (e.g., process drainage ditches or product storage tanks). Current EPA interpretation of this requirement has resulted in a Corrective Action process that begins with a RCRA Facility Assessment (RFA) to determine if corrective action is necessary.

[2]For the purposes of HSWA Corrective Action, a SWMU may include, but is not limited to, any landfill, surface impoundment, land treatment unit, waste pile, underground injection well, incinerator, boiler, industrial furnace, tank, container storage area, drip pad, containment building, miscellaneous unit; any units exempt from hazardous waste permitting requirements, such as wastewater treatment units, elementary neutralization units, totally enclosed treatment units, waste recycle/reuse units, and 90-day accumulation time units; or process units or areas which may have routine and/or systematic releases to the environment (e.g., process drainage ditches or product storage tanks).

The first step in the RFA is the development of a Preliminary Review (PR) from all available documentation for a facility (including but not limited to all facility documents, Part A, and Part B of the permit application, TCEQ correspondence files and inspection reports, etc.). The PR compiles available information on every SWMU and/or AOC that has ever existed at the facility. A unit checklist is completed for each SWMU and/ or AOC. On a unit-by-unit basis, the PR may recommend no further action for:

- well-designed and well-managed units
- units that have not managed hazardous wastes or wastes containing hazardous constituents;
- units already under corrective action by enforcement order; or
- units scheduled to be addressed in a compliance plan.

In addition, the unit checklists are summarized in a *Facility Checklist*. If there is a known release or potential for a release of hazardous waste or hazardous constituents from a unit/area, the PR may recommend a *RCRA Facility Investigation* (RFI), or an *Affected Property Assessment* (APA), if 30 TAC Chapter 350, Texas Risk Reduction Program (TRRP) applies, to determine the extent of the release for future corrective action, or stabilization as an appropriate and immediate corrective action.

The second step is a *Visual Site Inspection* (VSI) of the entire facility. The RFA is the combination of the PR and VSI documentation and any sample results. The RFA process should be scheduled so as to be completed during the latter stages of the Technical Review process or no later than one month in advance of the preparation of an initial draft permit for the facility. The RFA includes recommendations for whether further investigation or corrective action is warranted.

The requirements for an RFI or any other corrective action will be included in the permit, in the associated compliance plan which is mandatory for facilities with known groundwater contamination, or pursuant to 40 CFR 270.14(d)(3), the applicant may be required to start the RFI or other corrective action before the permit is issued. The RFI shall comply with all the applicable items contained in the U.S. EPA publication EPA/520-R-94-004, OSWER Directive 9902.3-2A, RCRA Corrective Action Plan (Final), May 1994, unless an alternate investigation approach is approved by the Executive Director. An RFI workplan may typically include a soil boring program, installation of monitoring wells, and sampling and analysis for 40 CFR 261 Appendix VIII and 40 CFR 264 Appendix IX hazardous constituents for surface soils, subsurface strata, surface water, groundwater, and/or air.

The permittee shall perform the RFI or APA and report the results. Corrective Action under 30 TAC Chapter 350 consists of an APA, determination of protective concentration levels, selection of a remedy standard (if necessary), development and implementation of a response action (if necessary), and submittal of required report according to 30 TAC Chapter 350.

If the RFI report indicates releases of hazardous waste or hazardous constituents for SWMUs and/or AOCs that have been grandfathered under 30 TAC Chapter 335 Subchapters A and S, Corrective Action shall consists of, if necessary, Interim Corrective Measures, *Baseline Risk Assessment* (BLRA)/*Corrective Measures Study* (CMS) Report, and *Corrective Measures Implementation* (CMI).

For grandfathered SWMUs and/or AOCs, the permittee may continue to complete the Corrective Action requirements under 30 TAC Chapter 335, Subchapter A and S, provided the permittee complies with the notification and schedule requirements pursuant to 30 TAC 335.8 and 350.(2)(m).

This report shall evaluate the risk, identify and evaluate corrective measure alternatives, and recommend appropriate corrective measure(s) to protect human health and the environment. The BLRA/CMS Report shall address all of the applicable items in 30 TAC 350, 30 TAC 335 Subchapter S, and the U.S. EPA publication EPA/520-R-94-004, OSWER Directive 9902.3-2A, RCRA Corrective Action Plan (Final), May 1994.

Upon approval of the BLRA/CMS Report by the TCEQ, the permittee shall submit a CMI Workplan to address all of the items for CMI Workplan contained in the U.S. EPA publication EPA/520-R-94-004, OSWER Directive 9902.3-2A, RCRA Corrective Action Plan (Final), May 1994. For projects conducted under TRRP, the risk assessment process shall be addressed in the *Affected Property Assessment Report* (APAR), and the evaluation of corrective measures shall be

conducted as part of the remedy standard selection process provided in the *Response Action Plan* (RAP). If the CMI or RAP does not propose a permanent remedy, then a CMI Workplan or RAP shall be submitted as part of a new compliance plan application or as a modification/ amendment application to an existing compliance plan. The workplan or RAP shall contain detailed final engineering design, monitoring plans, and schedules necessary to implement the selected remedy. Implementation of the corrective measures shall be addressed through a new and/or a modified/amended compliance plan. Upon installation of a corrective action system based upon the approved CMI Workplan or RAP, the permittee shall submit a CMI Report or RAP which includes as-built drawings of the corrective action system. To report the progress of the corrective measures, the permittee shall submit periodic CMI Progress Reports or Response Action Effectiveness Reports to the TCEQ in accordance with the schedule specified in the compliance plan. Upon completion of the corrective action requirements, the permittee shall submit CMI Report or Response Action Completion Reports for review and approval.

Please note that the applicant/permittee may perform voluntary corrective action, stabilization, or "interim measures" at any time prior to or during the RFA/RFI/CMS/CMI or the APAR/RAP process without prior TCEQ approval. The TCEQ strongly supports these actions when undertaken to mitigate releases or reduce or minimize exposure and releases to human health and the environment.

A. Preliminary Review Checklists

For Applications for a New Hazardous Waste Permit:

- For all facility Solid Waste Management Units (SWMUs) and/or Areas of Concern (AOCs), complete the accompanying forms entitled "Preliminary Review Facility Checklist" and "Preliminary Review Unit Checklist". Make additional copies as necessary.

For Applications for a Renewal/Amendment/Modification of an Existing Hazardous Waste Permit:

- Update the Preliminary Review Facility Checklist to include any newly identified SWMUs and/or AOCs that were not incorporated into the previous permit issuance (new, amendment, modification, or renewal), and to update the status of all previously identified SWMUs or AOCs which are incorporated into the existing permit under either Section IX - Corrective Action for Solid Waste Management Units, or Section XI - Compliance Plan. Status updates should include notes regarding whether the SWMU or AOC has been incorporated into a compliance plan, has received approval of no further action (NFA), has had changes in its corrective action status, or has had other determinations issued by the TCEQ. Include the date of the status change in the updated checklist;
- Complete the Preliminary Review Unit Checklists for any newly identified SWMUs or AOCs that were not incorporated into the previous permit issuance (new, amendment, modification, or renewal);
- Update the status on the Preliminary Review Unit Checklists for all previously identified SWMUs or AOCs that had not yet received TCEQ approval of NFA at the time of the previous permit issuance;
- Provide copies of the letters from the TCEQ approving NFA or other determinations that were issued since the previous permit issuance;
- For previously identified SWMUs and/or AOCs which are incorporated into the existing permit and are included in Section XI - Compliance Plan of this application, you may forego filling out the Preliminary Review Unit Checklists for these units. Briefly note on the Preliminary Review Facility Checklist that the SWMUs or AOCs are addressed in

Section XI. Provide the location where the SWMU's and addressed in Section XI. ; or

- If all previously identified SWMUs and/or AOCs reached NFA status at or before the last permit issuance you may forego filling out the Preliminary Review Unit Checklists, indicate Not Applicable, and provide a brief explanation of the facts.

The updated Preliminary Review Facility Checklist and Preliminary Review Unit Checklists are provided in Appendix IX, including new SWMUs and AOCs identified in permit modifications submitted in June 2023 and May 2024 as summarized in this section. Status updates for all previously identified SWMUs or AOCs which are incorporated into the existing permit under either Section IX - Corrective Action for Solid Waste Management Units, or Section XI - Compliance Plan are included in the Preliminary Review Facility Checklist. Previously identified SWMUs and/or AOCs which are incorporated into the existing permit and are included in Section XI - Compliance Plan are not included in the Preliminary Review Unit Checklists, as they are addressed in Section XI.

The June 2023 modification adding Red Bluff Tank Farm (RBTF) to the facility boundary identified four units as having a release or potential release of hazardous waste, hazardous constituents, or other constituents of concern: SWMU 12 (Refinery: Tanks 203 and 204), SWMU 13 (Refinery: Tank 97), SWMU 14 (RBTF: Tank 830), and SWMU 15 (Refinery: Tank 307). TCEQ approved the modification on December 14, 2023. Subsequently, a RCRA Facility Assessment (RFA) was submitted for the RBTF in April 2024. The RFA identified one additional SWMU and four AOCs at RBTF. The units identified in the RBTF RFA have been added to the Preliminary Review Facility Checklist and the Preliminary Review Unit Checklists in Appendix IX and to CP Table II of the Compliance Plan. SWMU and AOC numbers were assigned to these units in the RFA; however, these assignments were superseded by the May 2024 permit modification request. The SWMU and AOC numbers have been corrected in the Preliminary Review Checklists, and CP Table II, and associated figures.

The May 2024 modification adding the West and South properties to the facility boundary identified seven units as having a release or potential release of hazardous waste, hazardous constituents, or other constituents of concern: SWMU 16 (WP:PP024/PM019); SWMU 17 (WP: PP027); SWMU 18 (WP: PP002/PM024); SWMU 19 (WP:PP017); SWMU 20 (WP: PP026/PM020); AOC 21 (West Property Groundwater); and SWMU 22 (WP: PP014). These units were included in the Preliminary Review Facility Checklist and Preliminary Review Unit Checklists submitted with the modification request, which were considered "Draft" due to pending NOR updates. The NOR updates have been completed and are reflected in the Checklists presented with this application. TCEQ expects to approve this modification by October 14, 2024.

RFAs were submitted for the West Property and South Property during the first week of October 2024. Several new AOCs were identified and have been added to the Preliminary Review Facility Checklist and the Preliminary Review Unit Checklists in Appendix IX and to CP Table II of the Compliance Plan.

Complete Preliminary Review Facility Checklist (located in attachments)

Instructions for Preliminary Review Unit Checklist

Preliminary Review Facility Checklist

Preliminary Review Unit Checklist

X. Air Emission Standards

Provide all Part B responsive information in Appendix X. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

Section X.D. applies to Permittees with "one- stop" permits applying for an amendment, modification, or renewal of the Air Permits Division portions of their combined "one-stop" permit.

A. Process Vents

Does the facility have process vents and equipment subject to the requirements of 40 CFR Part 264, Subpart AA? **No; this facility does not have any process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations that manage hazardous wastes. Therefore, this section is not applicable.**

If Yes: please provide a report that includes all of the information required by 40 CFR §270.24. Indicate on a facility plot plan the approximate location of process vents.

1. For incorporation into the permit, complete Table X.A - Process Vents for all vents on waste management units that manage hazardous waste with an annual average total organics concentration of 10 ppmw or greater ("process vents"). Specifically include:

   a. process vents on distillation, fractionation, thin-film evaporation, solvent extraction, air or steam stripping operations, and vents on condensers serving these operations; and

   b. process vents on tanks (e.g., distillate receivers, bottom receivers, surge control tanks, separator tanks, and hot wells) associated with distillation, fractionation, thin-film evaporation, solvent extraction, and air or steam stripping processes if emissions from these process operations are vented through the tanks.
   Emissions caused by natural means such as daily temperature changes or by tank loading and unloading are not subject to control.

2. For process vents, include the following certification as part of the air emissions report:

   I,_____*[owner or operator]*___, certify that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is or would be 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.

   OR

   I further certify that the total organic emission limits of 40 CFR §264.1032(a) for affected process vents at the facility can be attained by a control device involving vapor recovery at an efficiency less than 95 weight percent.

   [Signature] _____ *[Date]* _____.

B. Equipment Leaks

Does the facility have equipment subject to the requirements of 40 CFR Part 264, Subpart BB? **No; therefore, this section is not applicable.**

If No: please provide the regulatory exclusion/exemption(s): **The exempt from permitting 90-day storage area does not contain any equipment subject to this subpart: valve, pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, or flange or other connector.**

Where applicable, permit exempt units, including tanks, are covered under the site air permits.

If Yes: please provide a report that includes all of the information required by 40 CFR §270.25.

1. For incorporation into the permit, complete Table X.B. - Equipment Leaks for all valves, pumps, compressors, pressure relief devices, sampling connection systems, and open-ended valves or lines that contain or contacts hazardous waste streams with organic concentrations of 10% by weight or greater. Equipment in vacuum service is not subject to control if identified in the facility operating record.

2. For equipment, include the following statement as part of the air emissions report:

   I, *[owner or operator]*, 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.

   [Signature] _____ *[Date]* _____.

C. Tanks, Surface Impoundments, and Containers

Does the facility have tanks subject to the requirements of 40 CFR Part 264, Subpart CC?

☐ Yes ☐ No X Not Applicable (no permitted tanks)

If No: provide the regulatory exception/exemption(s) for each tank subject to regulation under 40 CFR Part 264, Subpart J:

Does the facility have surface impoundments subject to the requirements of 40 CFR Part 264, Subpart CC?

☐ Yes ☐ No X Not Applicable (no permitted surface impoundments)

If No: provide the regulatory exception/exemption(s) for each permitted surface impoundment subject to regulation under 40 CFR Part 264, Subpart K:

Does the facility have containers subject to the requirements of 40 CFR Part 264, Subpart CC?

☐ Yes ☐ No X Not Applicable (no permitted container storage areas)

If No: provide the regulatory exception/exemption(s) applicable to the authorized containers subject to regulation under 40 CFR Part 264, Subpart I:

If the facility contains tanks, surface impoundments, and containers subject to the requirements of 40 CFR Part 264 Subpart CC, please provide a report that includes all of the information required by 40 CFR §270.27. **Not applicable**

1. For incorporation into the permit, complete Table X.C.

2. As applicable, include the following floating roof cover certification as part of the air emissions report for tanks:

   I, *[owner or operator]*, certify that the floating roof cover meets the applicable design specifications as listed in 40 CFR §264.1084(e)(1) or 40 CFR §264.1084(f)(1).

   [Signature] _____ *[Date]* _____.

3. As applicable, include the following floating membrane cover certification as part of the air emissions report for surface impoundments:

   I, *[owner or operator]*, certify that the floating membrane cover meets the applicable design specifications listed in 40 CFR §264.1085(c)(1).

   [Signature] _____ *[Date]* _____.

4. As applicable, include the following container certification as part of the air emissions report for containers:

   I, *[owner or operator]*, certify that the requirements of 40 CFR Part §264, Subpart CC, are met for all containers subject to control.

   [Signature] _____ *[Date]* _____.

5. As applicable, include the following control device certification as part of the air emissions report:

   I, *[owner or operator]*, 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.

   [Signature] _____ *[Date]* _____.

D. "One-Stop" Permits:

Does the facility have a "one-stop" permit?

☐ Yes X No

If yes: does this permit application propose to delete the "one-stop" portion of the permit?

☐ Yes ☐ No

Does the facility want the application processed in accordance with 30 TAC Chapter 33

- Consolidated Permit Applications?

☐ Yes ☒ No

If yes: please provide a copy of the notification of intent required by 30 TAC 33.43.

Permittees having "one-stop" permits may elect to combine the air and waste management amendment, modification, or renewal of permitted waste management units. The combined amendment, modification, or renewal application will follow the application processing procedures for an industrial solid waste permit. "One-Stop" permit applications shall include the following air quality information, as applicable.

1. Area map (to scale) showing the location of the plant and land use in the vicinity of the facility including buildings, schools, residences, etc. within 3000 feet.
2. Plot plan (to scale) with latitude and longitude showing the plant layout, property boundary and location of all emission points of air contaminants. Emission points are to be numbered.
3. Specific chemical name of each air contaminant and emission rate in maximum pounds per hour, maximum tons per year and calculations used to determine emission rates. Fugitive emissions are to be included. Complete Table 1(a) entitled "Emission Sources."
4. Process description, operating schedule, and flow chart in sufficient detail that will explain the process and operation and a material balance for processes where applicable. The description should include a discussion of disposal methods for any generated residues and associated air emissions.
5. Design specifications about each emission control device using the appropriate OAQ table.
6. Volatile organic compound (VOC) concentrations in water or sludges or soil and volumes or weights of water, sludges or soils to be processed.
7. Exhaust stack or emission point parameters for each emission point including height, diameter, temperature, velocity and flow rate, except ground level fugitive emissions.
8. Best available control technology (BACT) documentation for all new and modified facilities.
9. Documentation of compliance with any applicable Federal New Source Performance Standard (NSPS) and Federal National Emission Standard for Hazardous Air Pollutants (NESHAPS).
10. Documentation as to whether a permit is required under new source review requirements of part C or D or Title I of the Federal Clean Air Act, 42 U.S.C. 7401 et seq., for a major source or major modification.
11. Information that demonstrates reliability of emission control systems including process instrumentation, equipment redundancy and operating procedures.
12. Results of atmospheric dispersion modeling certified to have been conducted in accordance with applicable TCEQ Office of Air Quality (OAQ) procedures. Model results must show maximum off-property 30-minute and annual ground level concentrations of each air contaminant. Dispersion modeling results must indicate compliance with all OAQ Rules and Regulations. Dimensions of buildings/structures that may influence dispersion modeling are to be

furnished. Please consult with OAQ before beginning any modeling study.

13. Storage tank data including capacity in gallons, diameter, height, paint color, composition, density, vapor pressure and molecular weight of liquid stored, maximum hourly and annual throughput and number of turnovers per year. Complete Table 7 entitled "Storage Tank Summary" for each tank.

14. A statement addressing the applicability of each OAQ regulation.

15. All methods of calculating emissions must be properly referenced with justification for selecting and assuming the values used in any equation.

XI. Compliance Plan

Provide all Part B responsive information in Appendix XI. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

Groundwater Monitoring and Corrective Action Requirements for Regulated Units

Owners or operators of facilities that process, store, or dispose of hazardous waste may be required to establish groundwater monitoring and response programs in accordance with the provisions of 30 TAC 335.157. There are three types of groundwater monitoring programs which may be addressed in a Compliance Plan Application for Regulated Units: i) detection monitoring, ii) compliance monitoring, and iii) corrective action monitoring. The applicability of these various monitoring programs and the associated application requirements are illustrated in Figure 2 of the Compliance Plan Application instructions and further outlined below. A Compliance Plan Application will be required to be submitted when establishing a new compliance plan or incorporating changes in an existing compliance plan.

Detection Monitoring: An owner/operator required to conduct detection monitoring per the requirements of 30 TAC 335.164 must monitor for indicator parameters, such as specific conductance, total organic carbon, and total organic halogen, as well as chemical parameters and hazardous constituents specified in the facility permit. If a statistically significant increase in any parameter or hazardous constituent specified in the facility permit is detected in any monitoring well down gradient of the compliance point, the owner/operator must sample the groundwater in all monitoring wells and analyze the samples for the presence of 40 CFR Part 264 Appendix IX hazardous constituents. As shown in the accompanying Flow Diagram (see Figure 2), if the analytical results confirm the presence of Appendix IX constituents down gradient of the compliance point, the owner/operator must submit a Compliance Plan Application to establish a compliance monitoring program or corrective action program.

Compliance Monitoring: The requirements for compliance monitoring programs are detailed in 30 TAC 335.165. Owners/operators required to establish a compliance monitoring program must monitor the groundwater to determine whether Regulated Units are in compliance with the Groundwater Protection Standard (GWPS) specified in the compliance plan (see 30 TAC 335.158 .160). If a statistically significant increase above the GWPS in any chemical parameter or hazardous constituent specified in the compliance plan is confirmed, the owner/operator must submit a application to modify the compliance plan to establish a corrective action program in accordance with 30 TAC 335.166 (see Figure 2). If no such exceedance of the GWPS is detected for three consecutive years and the applicable compliance period has expired, the owner/operator must apply for modification of the compliance plan to re-establish a detection monitoring program for the unit. No further monitoring may be needed if the applicable post-closure care period for the unit is complete.

Regulated Unit Corrective Action Program: Owners/operators required to implement a corrective action program in accordance with the provisions of 30 TAC 335.166 must remove the hazardous waste constituents found in the groundwater or treat the groundwater in-place to levels equal to or less than the GWPS down gradient of the compliance point. The owner/ operator must also establish and implement a groundwater monitoring program to demonstrate the effectiveness of the corrective action program. Corrective action measures may be terminated once the concentrations of hazardous constituents are reduced to levels equal to or below their respective concentration limits. After termination of the corrective action measures, the owner/operator must submit an application for modification of the compliance plan to re-establish a compliance monitoring program for the duration of the

compliance period (see Figure 2).

Groundwater Corrective Action Requirements for Solid Waste Management Units (SWMUs)

HSWA Solid Waste Management Unit (SWMU) Corrective Action Program: An owner/operator of a Permitted facility or an applicant applying for a hazardous waste permit is required to submit a Compliance Plan Application if hazardous constituents have been released from a SWMU and/or Area of Concern (AOC) to the groundwater and exceeds background or Practical Quantitation Limit (PQL) values, if under Risk Reduction Rules 30 TAC 335 and/or appropriate Protective Concentration Limits (PCLs), if under Texas Risk Reduction Program Rules 30 TAC 350. The Permitted facility must implement a corrective action program for SWMUs and/or AOCs in accordance with provisions 30 TAC 335.167 (see Figure 3, page 122 of the instructions for example of process-alternate, but equivalent process may be authorized by the Executive Director).

Compliance Plan Application Form Structure:

The Compliance Plan Application consists of Sections XI.A. through E.

Application Information Form:

This section contains detailed information necessary for the application and regulatory requirements needed to put in the final compliance plan.

The application form contains the following subsections:

A. Site Specific Information

B. Groundwater Protection Standard (GWPS)

C. Compliance Monitoring Program

D. Corrective Action Program

E. Cost Estimates for Financial Assurance

1. Table XI.E.1 Corrective Action Program Cost Estimate
2. Table XI.E.2.e Groundwater Monitoring Cost Estimate
3. Table XI.E.3. Financial Assurance Summary

CP Attachments:

A. Maps

B. Well Design and Construction Specifications

C. Sampling and Analysis Plan

Compliance Plan Site Specific Tables:

This section includes the following tables which are to be completed by the applicant, as applicable, and shall be incorporated as part of the final draft Compliance Plan. [Note: include a CD disk or the USB with the application providing an electronic copy of the files supporting the compliance plan tables. **Tables should be converted to the PDF format when submitting the application**:

CP Table I - Waste Management Units and/or Areas Subject to Groundwater Corrective Action and Compliance Monitoring

CP Table II - Solid Waste Management Units and/or Areas of Concern for which Corrective Action applies pursuant to 30 TAC 335.167.

CP Table III - CORRECTIVE ACTION PROGRAM Table of Detected Hazardous and Solid

Waste Constituents and the Groundwater Protection Standard

CP Table IIIA - CORRECTIVE ACTION PROGRAM Table of Indicator Parameters and the Groundwater Protection Standard

CP Table IV - COMPLIANCE MONITORING PROGRAM Table of Hazardous and Solid Waste Constituents and Practical Quantitation Limits or Method Quantitation Limits for Compliance Monitoring

CP Table IVA - COMPLIANCE MONITORING PROGRAM Table of Detected Hazardous Constituents and the Groundwater Protection Standard for Compliance Monitoring

CP Table V - Designation of Wells by Function

CP Table VI - Compliance Period and Post Closure for RCRA-Regulated Units

CP Table VII - Reporting Requirements

CP Table VIII - Compliance Schedule

CP Table IX - Description of Uppermost Aquifer

Note to the Permittee: All responses to each item in Section XI of the application form should be submitted under Appendix XI- Compliance Plan. The applicant should use the MS Word formatted Tables provided in the Part B application to include site-specific information that will become part of the final draft permit. For consistency, the tables provided in the application are formatted to be accessible, and the agency will no longer accept site-specific tables created by the applicant. **Convert the tables to the PDF format when submitting the application.** Do not delete any areas of the application form that are not applicable, submit answers to these areas with a response of either 'Reserved' or 'Not Applicable' in the Appendix XI. In addition, if material supporting a response is located elsewhere in the application, the response should provide details as to the specific location within the referenced material.

One of the primary goals of the performance based Compliance Plan is the wells listed in, CP Table V - Designation of Wells by Function (to be included in the final Compliance Plan) are the wells in which the GWPS must be met to verify compliance with Compliance Monitoring program or corrective action objectives, and to change the table would require a modification. On the other hand, the following types of wells Corrective Action Observation Wells, Corrective Action System well, etc., that are included in "Attachment A" maps of the final draft Compliance Plan, should be flexible. The purpose is to provide the permittee with the authority to alter the groundwater monitoring system and Corrective Action System designs, as necessary, to proactively address changing environmental conditions without modifying or amending the Compliance Plan. An application to modify/amend the compliance plan is only required if wells listed in CP Table V are changed; consequently, Corrective Action Observation and Corrective Action System Wells are not listed in CP Table V of the compliance plan so they may be added or removed without modifying/amending the compliance plan. Notification of proposed changes to the groundwater monitoring system and Corrective Action System designs can be included in the semiannual or annual report required by CP Table VIII - Compliance Schedule (to be included in the final Compliance Plan).

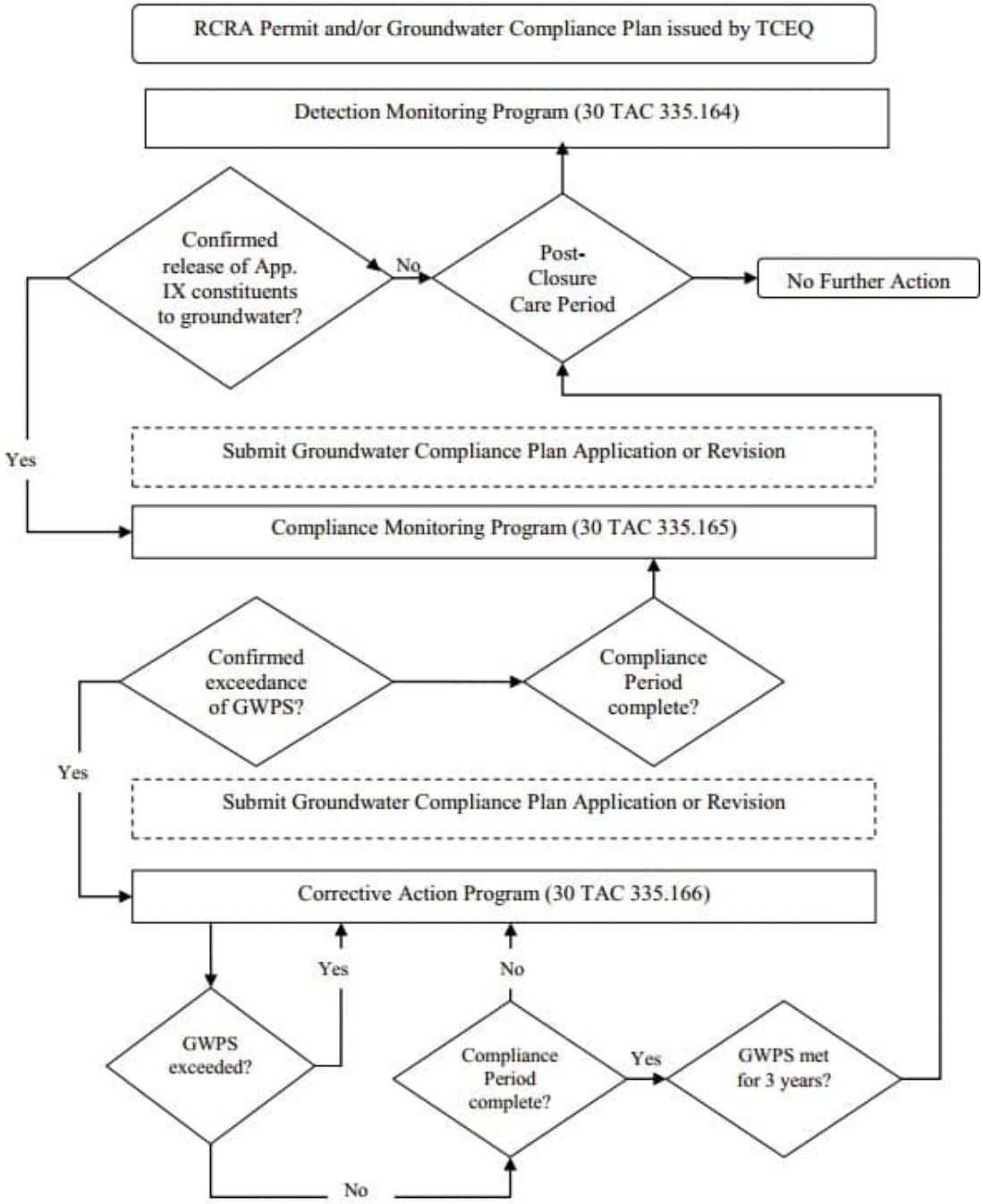
Figure 1 - Overview of Required Submittals And Revisions Associated with TCEQ Groundwater Compliance Plan Application

Type of Compliance Plan Application or Revision	Minimum Required Submittals				Additional Application Submittals Or Revisions					
	Description of Modification	Public Notification Evidence	Fee Payment Evidence	Part B, Section I	Section XI. A.	Section XI.B	Section XI.C	Section XI.D	Section XI.E	Attachment A
				General Information	Site-Specific Information	Groundwater Protection Standard	Compliance Monitoring Program	Corrective Action Program	Financial Assurance Cost Estimates	Alternate Concentration Limits
RCRA Permitted Units										
Compliance Monitoring Program, Commencement or modification per 30 TAC 335.165.	•	•	•	•	•	•	•	o	•	■
Corrective Action Program, commencement or modification per 30 TAC 335.166.	•	•	•	•	•	•	o	•	•	■
Compliance Period, termination or extension per 30 TAC 335.162.	•	•	•	•	■	o	•	o	■	o
Solid Waste Management Units										
Corrective Measure Implementation (CMI), per 30 TAC 335.167.	•	•	•	•	•	•	■	•	•	o
Corrective Action Program termination.	•	•	•	•	■	o	•	o	o	o

Note:

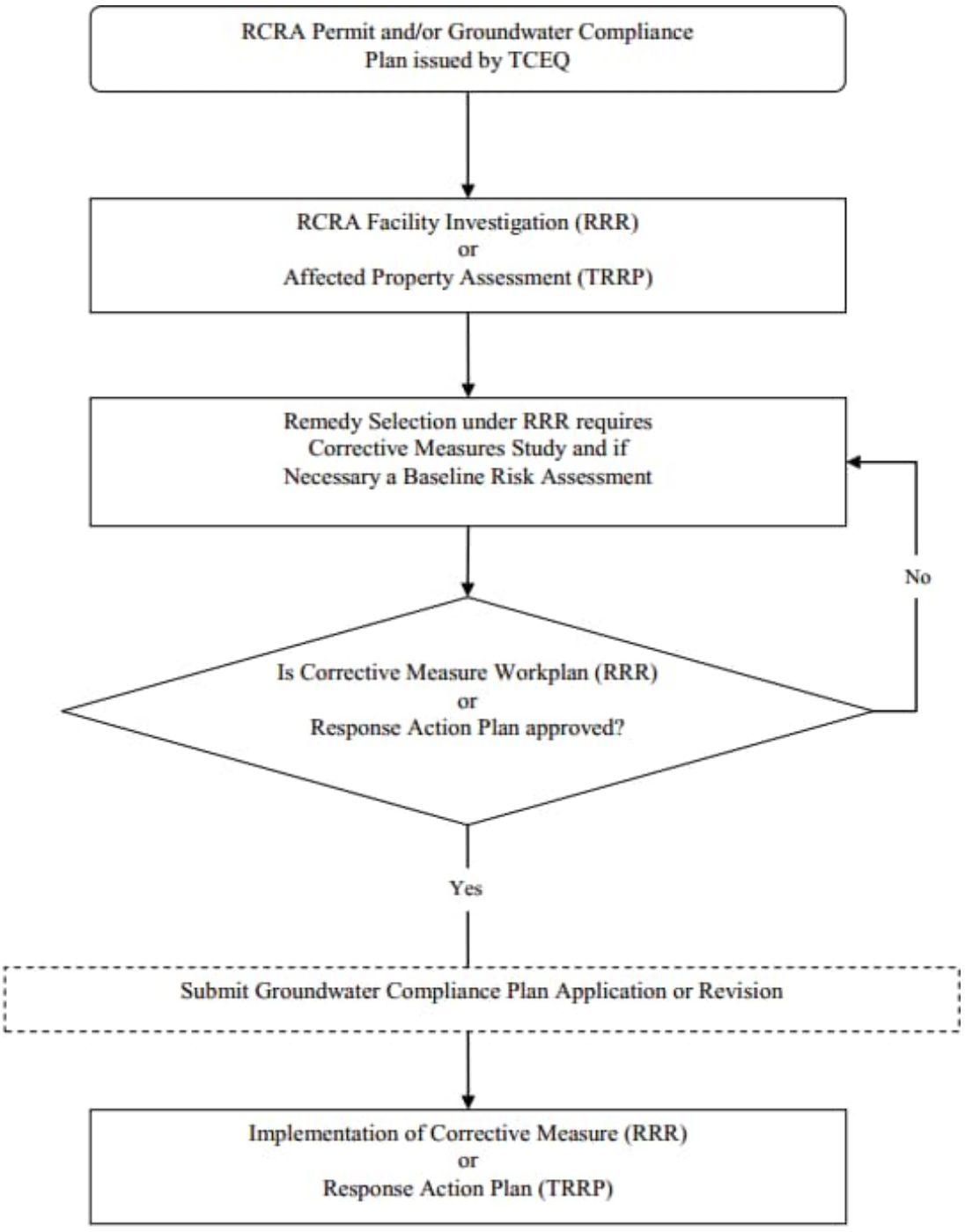
- • Submittal of additional or revised information required.
- o No submittal of additional or revised information required.
- ▪ Possible submittal of additional or revised information required

Figure 2 - Summary of Groundwater Monitoring and Compliance Plan Application Requirements for Regulated Waste Management Units (30 TAC 335 Subchapter F)



Note:
- GWPS = Groundwater Protection Standard (See Section XI.B. of this document, and 30 TAC 335.158 – 160)
- App. IX = Groundwater Monitoring List, 40 CFR 264 Appendix IX.
- Compliance Period = See Section XI.E. of this application, and 30 TAC 335.162.

Figure 3 - Summary of Compliance Plan Applications Requirements for Solid Waste Management Units (SMMUS) (30 TAC 335.167)



Note:
(RRR) – Risk Reduction Rules, 30 TAC 335
(TRRP) – Texas Risk Reduction Program, 30 TAC 350

A. Site Specific Information

Ponds Waste Management Area (WMA; Stormwater Pond and Bauxite Pond)

Groundwater monitoring for the Ponds WMA is under a corrective action program established within the existing Compliance Plan. PRSI operates a groundwater recovery system for the Ponds WMA to remove light non-aqueous phase liquid (LNAPL) and dissolved-phase hydrocarbons from affected wells in Groundwater Regions 3 and 4. Groundwater Regions 3 and 4 are encompassed by the Site-Wide Plume Management Zone (PMZ). Groundwater protection standards within the PMZ are based on critical groundwater to surface water Protective Concentration Limits (PCLs). The groundwater protection standards for the Ponds WMA are consistent with those within the PMZ. A description of the approved corrective action system is provided in Appendix XI.D.6.1.

Moat

Groundwater monitoring for the Moat is conducted under a compliance monitoring program established within the existing Compliance Plan. A description of the compliance monitoring program is included in Appendix XI.C.1.

Refinery Site-Wide Plume Management Zone and Region 7 Plume Management Zone

The existing Compliance Plan currently incorporates a site-wide response action and groundwater monitoring program to address groundwater impacts from sources other than RCRA-regulated units (i.e. historical releases from piping, product tanks, and non-RCRA solid waste management units) at the Main Refinery. This system is operating satisfactorily in all groundwater regions within the refinery and no changes are requested with this permit renewal. Response Action Plans (RAPs) for the site-wide PMZ and groundwater Region 7 PMZ are included in Appendices XI.D.6.1 and XI.D.6.2, respectively.

West Property Plume Management Zone

The West Property was added to the facility boundary as a Class 2 permit modification submitted on May 30, 2024. At the time of submittal, only the facility boundary was revised. PRSI proposes a Class 2 modification with this permit renewal to make changes to the existing site-wide groundwater monitoring program. The West Property PMZ was governed under the Texas Risk Reduction Program prior to integration of the West Property into the facility boundary. An Affected Property Assessment Report (APAR) was submitted on August 26, 2011 documenting assessments conducted from 2006 to 2011. On March 23, 2012 a RAP was submitted which included soil and groundwater response action objectives and response action design for the West Property (See Appendix XI.D.6.3). Results of groundwater monitoring events conducted between March 2012 and December 2016 were submitted semi-annually to TCEQ in groundwater monitoring reports. The first Response Action Effectiveness Report (RAER) was submitted in 2017, documenting the results and effectiveness of response actions conducted through 2016. Subsequent RAERs were submitted triennially, in 2020 and 2023.

Three WMUs were addressed in the RAP as follows:

- Above-ground WMU PP002/PM024: This WMU, located in the "Former Beater Room", was previously used for the storage of PCB-containing materials and equipment. A 20-inch thick covered concrete foundation beneath this WMU serves as an engineered cap to prevent possible exposure to underlying soil until demolition of the WMU is completed to allow assessment of the underlying soil. In accordance with the RAP, the cap has been inspected semi-annually in June and December of each year by a Texas-licensed Professional Engineer (P.E.), with the exception of December 2023. On November 28, 2023, PRSI requested access to the Beater Room be restricted due to observed structural issues with the building and safety concerns for human access to the building. The inspection findings of the cap for June 2021, December 2021, June 2022, December 2022, and June 2023 indicate the cap has remained structurally sound and in good condition.

- **Below-ground WMU PP017: $^{GW}Soil_{Ing}$ PCL exceedances of arsenic and lead are addressed within a PMZ.**
- **Below-ground WMU PP026/PM020: Lead $^{GW}Soil_{Ing}$ PCL exceedances are addressed within a PMZ.**

Two PMZs were established at the Site: one north of Little Vince Bayou (PMZ North) and one south of Little Vince Bayou (PMZ South). PMZ North is defined by PCE, TCE, vinyl chloride, and pentachlorophenol $^{GW}GW_{Ing}$ PCL exceedances at MW-7 only and PCBs, arsenic, and lead $^{GW}Soil_{ing}$ PCL exceedances in soil. PMZ South is defined by benzene and arsenic $^{GW}GW_{Ing}$ PCL exceedances in groundwater and arsenic and lead $^{GW}Soil_{Ing}$ PCL exceedances in soil.

These WMUs and PMZs have been added to CP Table II as newly-identified SWMUs and an AOC. Three additional areas where WMUs have not achieved closure are also identified as new SWMUs. These units are also shown on CP Attachment A Sheets 6 and 9. Details of the groundwater monitoring program, cost estimates, and compliance schedules for the West Property are provided in CP Tables III, IIIA, V, VII, and VIII.

1. General Site Information (provide the following information): **See Appendix XI.A**
   a. An overall plan view map of the entire facility delineating the facility's property boundary, Facility Operations Area (FOA) boundaries, as applicable, and the plume management zone (PMZ) boundaries as applicable;

   All CP Attachment A Maps should be provided in Appendix XI of the application.

   b. A 7.5 minute U.S.G.S. quadrangle topographic map showing the entire facility;
      NOTE: This information is supplemental only and is not intended to be included as figures in the final draft permit.
   c. All oversized (larger than 8.5" by 11") drawings submitted in accordance with A, above, should be accompanied with legible photocopies of the reduced drawing on 8.5" by 11" sheet(s) of paper which shall be used as "CP Attachment A" maps in the final draft Permit/Compliance Plan. The applicant should title the map(s) accordingly as "CP Attachment A, Sheet 1 of xx - Facility Site Map"; "CP Attachment A, Sheet xx of xx, FOA Lateral Boundary Map"; "CP Attachment A, Sheet xx of xx, PMZ Boundary Location Map"; and
   d. Aerial photographs through time depicting changes in the land use, if available.
      NOTE: This information is supplemental only and is not intended to be included as figures in the final draft permit

2. Waste Management **See Appendix XI.A**
   Provide a complete list and a plan view drawing(s) locating and identifying the following waste management units at the scale of 2.5 centimeters (1 inch) equal to not more than 61.0 meters (200 feet). All oversized (larger than 8.5" by 11") drawings should be accompanied with legible photocopies of the reduced drawing on 8.5" by 11" sheet(s) of paper. Please provide information for each waste management unit listed below on CP Table XI.A.1. - Facility History for Waste Management Units.

   All CP Attachment A Maps should be provided in Appendix XI of the application.

   a. All hazardous waste management units regulated under the Industrial Solid Waste and Municipal Hazardous Waste Rules (Chapter 335) required to be monitored in accordance with 30 TAC 335.164 (Detection Monitoring),

335.165 (Compliance Monitoring Program) and 335.166 (Corrective Action Program);

b. All solid waste management units (SWMUs) and Areas of Concern (AOCs) regulated under 335.167 which are recommended for further investigation and/or corrective action in the RCRA Facility Assessment (RFA) shall include those identified in accordance with the permit requirements subsequent to the initial RFA.

c. All on site wastewater treatment units.

3. Facility History **See Appendix XI.A and Appendix IX - CP Tables**

Based on the information provided in CP Table XI.A.1., complete CP Table I - Waste Management Units and Areas Subject to Groundwater Corrective Action and Compliance Monitoring accordingly in the format provided.

For the SWMUs or AOCs listed in CP Table XI.A.1. regulated under 30 TAC 335.167 which are recommended for further investigation and/or corrective action in the RCRA Facility Assessment (RFA), including those identified in accordance with permit requirements subsequent to the initial RFA, complete CP Table II - Solid Waste Management Units and Areas of Concern for which Corrective Action applies pursuant to 30 TAC 335.167. CP Table II will become part of the Compliance Plan.

4. Site Geology, Hydrogeologic Conditions, and Relationship to Surface Water **See Appendix VI.**

For New, modified/amended Compliance Plan, please provide a Geology Report as required by Section VI.B of this application containing updated site geologic information including the following descriptions, maps and tables with appropriate supporting documentation [All maps should be at the scale of 1 inch equal to not more than 200 feet and legible when reduced to 8.5" by 11" letter size paper]:

a. A description of the site geology for the facility. The geologic description should include a site geology map and sufficient cross sections (see Item h. below) to describe the uppermost aquifer and any confining stratigraphic unit(s) beneath the site.

b. A description of the site soils and subsurface lithologies using the Unified Soil Classification System. For those soil units which do not extend beneath the entire site area, the soil description should include a plan view map designating the soil's areal extent;

c. Where a soil remedy is required in a corrective action program of Section XI.D.1. of this application for a Regulated Unit, SWMU and/or AOC, the applicant shall submit a description of contamination in soils of the vadose zone (unsaturated zone above the uppermost aquifer). The soil description should include maps indicating lateral and vertical extent of contamination;

d. A description and designation of the uppermost saturated zone or uppermost aquifer including the name, the type of unit (e.g. perched, confined, etc.,), and groundwater characteristics (flow rates, directions, hydraulic conductivity, etc.). As defined in 40 CFR 260.10, an aquifer is a geologic formation, group of formation, or part of a formation, capable of yielding significant amount of groundwater to wells or springs. Persons using Texas Risk Reduction Program (TRRP) should also consider the definition of a groundwater bearing unit as a saturated geologic formation, group of formations, or part of a formation with a hydraulic conductivity of

equal to or greater than 1 x 10 -5 centimeters/second (30 TAC 350.4(a)40). Based on the information contained in the Geology Report, complete CP Table IX-Description of Uppermost Aquifer. CP Table IX will be come part of the Compliance Plan. **See Appendix XI-CP Tables.**

e. Present the geologic, stratigraphic and hydrogeological information; and

f. Maps indicating the lateral and vertical extent of the contamination for each stratigraphic unit affected, with supporting documentation.

g. Current Contaminant Plume Map(s) Locating and identifying the extent of contamination as determined from previous monitoring on a separate facility base map(s). Locate and identify all monitor wells and waste management units/areas.

h. Cross section Cross section transect lines should be indicated on the Contaminant Plume Map. The applicant, at a minimum, must submit two (2) stratigraphic cross sections for each waste management unit/area. One cross section should be drawn through all the point of compliance wells and the second cross section should be drawn along the direction of the movement of the contaminant plume released from the unit/area. Cross sections should follow the requirements outlined in the Geologic and Hydrogeologic Report of Parts IV and V of this application. At a minimum, the cross sections should include the following information:

   1. the stratigraphic interpretation (e.g., surface grade, uppermost aquifer, aquiclude);
   2. lithology/geologic description of the uppermost aquifer and aquiclude;
   3. the potentiometric surface;
   4. detected non-aqueous phase liquids (NAPLs) and hazardous constituents; and
   5. screen length and screen depth for each well in the cross section.

i. Well Construction diagram The report should include a well construction diagram for all wells used in the cross section. The well construction diagram should include the information in "Attachment B" of this (Compliance Plan) application. The well construction diagram information may be included on the geologic cross-section(s).

j. Describe the potential for any surface water bodies to be hydraulically connected to groundwater containing hazardous constituents. Apply the guidance provided in Determining PCLs for Surface Water and Sediment, RG-366/TRRP-24 Revised, December 2002, in order to determine the water body type and applicable surface water criteria for human health, aquatic life and wildlife, as applicable.

B. Hazardous Constituents In Groundwater And Groundwater Protection Standards (GWPSs)

Hazardous Constituents in Groundwater

For each contaminated hydrogeologic unit beneath a waste management unit/area (40 CFR 264.95), provide a list of all 40 CFR Part 264 Appendix IX hazardous constituents that have been detected in groundwater samples above background values, Practical Quantitation Limits (PQLs), or Method Quantitation Limits (MQLs). Please submit for each unit/area the most recent Appendix IX laboratory analysis results showing the constituents, constituent concentrations, methods used for analysis and associated

laboratory QA/QC. **See Appendix XI.B.**

The groundwater samples (collected for the purpose of determining whether constituents listed in Appendix IX are present) shall be from each waste management unit/area monitoring well system as required by 30 Texas Administrative Code (TAC) 335.164 (detection monitoring program).

If the waste management unit/area is subject to Corrective Action Program required by 30 TAC 335.166 or 335.167 and/or Compliance Monitoring required by 30 TAC 335.165, then list the unit/area and include the list of hazardous constituents and their principal degradation constituents in:

CP Table III - Corrective Action Program Table of Detected Hazardous and Solid Waste Constituents and the Groundwater Protection Standard; and **See Appendix XI - CP Tables.**

CP Table IV - Compliance Monitoring Program Table of Hazardous and Solid Waste Constituents and Practical Quantitation Limits or Method Quantitation Limits for Compliance Monitoring. **See Appendix XI - CP Tables.**

1. Groundwater Protection Standards (GWPSs)
   The GWPS (30 TAC 335.158) is designed to ensure that hazardous constituents (30 TAC 335.159) identified in groundwater and their principal degradational constituents do not exceed concentrations that pose a present or potential hazard to human health and the environment. Compliance monitoring and corrective action programs for a Regulated Unit (30 TAC 335.165 and 335.166) and a corrective action program for a solid waste management unit (SWMU) (30 TAC 335.167) require human health and the environment to be protected from all releases of hazardous wastes and constituents. These corrective action and monitoring programs are evaluated using the GWPS. The GWPS is based on the following criteria.
   a. Background Levels Background levels authorized under 30 TAC 335.160(a)(1) are defined as constituent concentration values that are naturally occurring or are not influenced by contamination coming from the waste management unit. These values are established by statistical analysis of upgradient well sampling data. Analytical results from a sufficient number of independent samples are required to be utilized with an approved and appropriate statistical method. For guidance on the statistical methods consult, Statistical Analysis of Groundwater Data at RCRA Facilities-Unified Guidance, U.S. EPA, March 2009, and any subsequent updates to this document.
      Practical Quantitation Limits (PQLs) or Method Quantitation Limits (MQLs) are utilized in lieu of background values unless a background demonstration establishes concentrations for naturally occurring constituents. The PQL or MQL is defined in the footnote of CP Tables III and IV.
   b. Primary and Secondary Maximum Contaminant Levels (MCLs) Maximum permissible level of a contaminant in water which is delivered to any user of a public water system (40 CFR Part 141 and 143, Federal Safe Drinking Water Act).
   c. Alternate Concentration Limits (ACLs) determined in accordance with 30 TAC 335.160(b) and are defined in footnote of CP Tables III and IV.

2. Establishing the Groundwater Protection Standard (GWPS) **See Appendix XI.CP Tables. GWPs listed for the Ponds WMA, Moat Area, Groundwater Region 7, and Site-Wide Groundwater are the same as in the 2015 Compliance Plan. GWPs for the West Property are those developed in the Response Action Plan (RAP) and used for data evaluation in the subsequent Remedial Action Effectiveness Reports (RAERs) submitted in 2017, 2020, and 2023.**
   a. If background, PQL or MQLs are proposed for the GWPS, the applicant must list all constituents (i.e., detected and degradational constituents) for which a GWPS is being applied for and the appropriate concentration limits. This

information shall be submitted in the format of CP Tables III, and IV.

b. Alternate Concentration Limits (ACLs) ACLs are established at the point of compliance (POC) for a regulated or solid waste management unit (SWMU). All concentration values or limits listed in Section XI.B.1.c. are considered ACLs. ACLs are evaluated in accordance with the provisions of 30 TAC 335.160(b) and other regulations acceptable to the executive director. If an ACL is requested on the basis of Section XI.B.1.c. (MCLs), then no ACL demonstration is necessary. The ACL demonstration must establish constituent concentrations in groundwater in accordance with regulations acceptable to the executive director. This information shall be submitted in the format of CP Tables III and IV. Note that depending upon the rule employed [i.e., 30 TAC 335 Subchapter S - Risk Reduction Rules (RRR) or 30 TAC 350 - Texas Risk Reduction Program (TRRP)], the applicant should determine the GWPS for the point of compliance and point of exposure, as applicable, in accordance with the remedy standard being utilized.

c. If the contaminant plume discharges or has a potential to discharge into surface water, then the facility must also comply with 30 TAC Chapter 307 (Texas Surface Water Quality Standards) unless other regulatory requirements acceptable to the executive director are requested.

C. Compliance Monitoring Program

As required by 30 TAC 335.165, an owner or operator must monitor the groundwater to determine whether Regulated Units are in compliance with the Groundwater Protection Standard (GWPS) under 30 TAC 335.158. The applicant must provide the following information when proposing a compliance monitoring program.

1. Groundwater Monitoring Program Description

a. Describe the proposed groundwater monitoring system to be used to monitor compliance with the GWPS which includes the following information.

(1) Changes, if applicable, from the current detection monitoring system or compliance monitoring system groundwater monitoring program at the waste management unit that will be required to comply with the compliance monitoring program described in 30 TAC 335.165. This description should address changes concerning: **Two changes to the groundwater monitoring program for the Moat Area are proposed: updating the financial assurance cost estimate and reducing sampling frequency from semi-annual to annual. Since 2015, analytical results for Table IV constituents have consistently been non-detect in all point-of-compliance (POC) wells for the Moat area except for toluene and barium. Toluene was detected in approximately 13% of field samples in POC wells at three to four orders of magnitude below the GWPS, compared with detections in 16% of background well samples at the same order of magnitude. Barium was consistently detected in POC wells at one order of magnitude below the GWPS, consistent with detections in the background well. Therefore, PRSI proposes to add toluene and barium to CP Table IV and sample annually for the constituents listed in CP Table IV. If a statistically significant increase in toluene or barium is observed during annual sampling, semi-annual CP Table IVA sampling could be resumed.~~increasing the time allotted for Compliance Monitoring from the first 30 days of each first and third quarter to the first 60 days. The additional time is requested to allow for weather conditions that inhibit monitoring during the first 30 days of those quarters (freeze~~

~~conditions during January and tropical events in July). PRSI is not requesting a change in the reporting deadline.~~

(a) Geological and/or hydrogeological information differences since the submittal of the previous application [must submit an updated Geologic and Hydrogeologic Report required by Section XI.A.4];
(b) Waste management areas/units;
(c) Construction details for monitor wells to evaluate compliance with "Attachment B" well specification requirements;
(d) The number and locations of additional monitor wells [also see Section XI.C.1.b.(2)];
(e) Sample handling, chain of custody, and analytical procedures (also see "Attachment C");
(f) Frequency of monitoring;
(g) Monitoring parameters;
(h) Evaluation of compliance with GWPS (Statistical Methods);
(i) Other Sampling and Analysis Plan information to be compliant with "Attachment C";
(j) Compliance period as defined in Section XI.E.1.c. of the application;
(k) Financial assurance (see Section XI.E.); and
(l) An ACL variance under 30 TAC 335.160(b), if applicable.

(2) The number, depth and location of all monitor wells (Background Wells, Point of Compliance Wells, Observation Wells, Piezometers, etc.). Complete CP Table V - Designation of Wells by Function and make changes as applicable to plans referenced in Section XI.C.1.b. **See Appendix XI.C.1.a and Appendix XI–CP Tables.**

(3) The proposed hazardous constituent monitoring list which is based on constituents that were monitored during detection monitoring (if applicable), constituents detected in accordance with 30 TAC 335.164, and degradational constituents identified in Table CP IV accordingly to develop the constituent list for the Compliance Monitoring Program. Also, list the PQL, MQL, or background concentration for each constituent in CP Table IV. CP Table IV shall become part of the final Compliance Plan to be analyzed at least annually as required by 30 TAC 335.165(7). **See Appendix XI–CP Tables.**

(4) The proposed indicator parameter monitoring list. From the list of constituents and GWPS identified in CP Table IV., complete CP Table IVA - Compliance Monitoring Program, Table of Detected Hazardous Constituents and the Groundwater Protection Standard for Compliance Monitoring, accordingly. CP Table IVA shall become part of the final Compliance Plan to be analyzed at least semiannually as required by 30 TAC 335.165(6).

See Appendix XI–CP Tables.

(5) Frequency of monitoring should be specified in CP Table VIII

See Appendix XI-CP Tables. Semi-annual monitoring is proposed, consistent with the existing Compliance Plan.

(6) Provisions for reporting groundwater data at least on an annual basis should be specified in CP Table VII). **See Appendix XI–CP Tables. Annual Reporting is proposed, consistent with the**

existing Compliance Plan.

(7) Annual determination of contamination plume rate and direction of migration. See Appendix XI–CP Tables.

(8) Compliance period. Calculate the compliance period as required by 30 TAC 335.162 and 335.165(1)(d). Include calculations and complete CP Table VI - Compliance Period for RCRA-Regulated Units which shall become part of the final Compliance Plan. The Compliance Period for the Moat is 12 years beginning in 2007 and ending in 2019. The compliance period has ended; however, as the Moat is included in a Groundwater Corrective Action program, the compliance date is extended in accordance with 30 TAC 333.162(c) until PRSI can demonstrate that the groundwater protection standard has not been exceeded for a period of three consecutive years.

b. Submit the following plans and reports.

(1) Current Sampling and Analysis Plan The Sampling and Analysis Plan must include information required by 30 TAC 335.163(4) and 335.163(5) and 40 CFR Subpart 270.30(j). For guidance, please see "Attachment C" to the application. The currently approved Sampling and Analysis Plan (Dated February 2007) is provided in Appendix XI.C.1.b.

(2) Monitoring System Plan If the applicant is proposing a monitoring well or a monitoring system in the application, the applicable well installation specifications outlined in "Attachment B" of this application should be followed. All new monitoring wells must be installed in accordance with the specifications outlined in "Attachment B", unless an alternative design is approved by the agency prior to installation. If the applicant proposes as part of the monitoring system, any well (existing or proposed) that does not meet or exceed the requirements outlined in "Attachment B", then the proposed alternative design must be described in detail in the Monitoring System Plan and must be submitted with this application. The Monitoring System Plan must include: See Appendix XI.C.1.a.

(a) Monitoring System Design and Specifications Certified by a qualified engineer and/or geologist which provides detailed plans and specifications on the monitoring system design; and

(b) Well Drilling and Well Casing Specifications Certified by a qualified engineer and/or geologist which provides details on well casing specification, drilling logs and reports.

(3) Current Geologic and Hydrogeologic Report Provide a report per Section X.I.A.4 of this application discussing the geologic and hydrogeologic conditions of the facility and the specific area affected by the waste management areas. This report should include the most up-to-date information from which the design of the groundwater monitoring system was based. See Appendix VI.

2. Waste Management Units Monitored

a. Delineate and identify the following for each waste management unit in the proposed groundwater monitoring program. See Appendix XI.C.1.a.

(1) Boundary of the waste management unit and, if applicable, the

proposed waste management area which includes more than one waste management unit (identify all waste management units which are included in the waste management area). These waste management units subject to compliance monitoring should be listed in CP Table I - Waste Management Units and Areas Subject to Groundwater Corrective Action and Compliance Monitoring which shall become part of the final Compliance Plan.

(2) The proposed point of compliance (30 TAC 335.161) and point of exposure wells.

(3) Any other proposed monitor wells such as supplemental wells, observation wells, background wells, etc. If appropriate the groundwater monitoring system should have a sufficient number of wells be designated to monitor the downgradient extent of the plume.

(4) Features which may serve as conduits for subsurface contamination.

b. For each waste management unit/area in the proposed groundwater monitoring system, submit the locations of individual waste management unit/area monitor wells (existing or proposed) and any soil borings (plugged and unplugged) specifically drilled for assessment of contamination. These individual monitor wells shall be identified by respective well number on a plan view drawing and only the background, point of compliance and/or point of exposure wells should be indicated in CP Table V - Designation of Wells by Function. The plan view map depicting the location of individual monitoring wells for compliance monitoring should be labeled as "CP Attachment A, sheet xx of xx" in the text box. The title box should also include reference to the facility name, Permit/Compliance Plan Number, Solid Waste Registration Number, Unit Description or name with Notice of Registration (NoR) Unit No. 0000. The "CP Attachment A" map(s) and CP Table V shall also become part of the final Compliance Plan.

3. Implementation Schedule

Itemize and discuss, in detail, the estimated time schedule necessary for any testing and assessments, system design, construction and installation, and final implementation of the groundwater monitoring program for each Regulated Unit and solid waste management unit. If the schedule of implementation for items are not completed at the time of the application or are not completed at the time of issuance of the final draft Permit/Compliance Plan, then the items should be added to the CP Table VIII - Compliance Schedule of the application. **Groundwater Monitoring is ongoing.**

D. Corrective Action Program

As required by 30 TAC 335.166, the owner or operator must take corrective action to ensure that Regulated Units are in compliance with the Groundwater Protection Standards (GWPS) under 30 TAC 335.158. As required under 30 TAC 335.167, all releases of hazardous constituents from any solid waste management unit at the facility must also be addressed. For existing corrective action programs which have been approved by the TCEQ, the applicant shall provide a copy of the TCEQ corrective action system approval letter, design system specifications and any updates as requested in Section XI.D.3.a.(1) of this section. The applicant must provide the information requested below when proposing a corrective action program which has not been previously approved by the TCEQ including a detailed description of a corrective action or a combination of corrective actions that will remedy the groundwater contamination at the waste management unit and a proposed plan for a monitoring program that will demonstrate the effectiveness of the corrective action.

Ponds WMA (Stormwater Pond and Bauxite Pond)

Groundwater monitoring for the Ponds WMA is governed by a corrective action program in the existing Compliance Plan. PRSI operates a groundwater recovery system for the Ponds WMA to remove LNAPL and dissolved phase hydrocarbons from affected wells in the vicinity (Groundwater Regions 3 and 4). Groundwater Regions 3 and 4 are encompassed by the Site-Wide PMZ. A description of the approved corrective action system is provided in Appendix XI.D.6.

Site-Wide PMZ

The existing Compliance Plan incorporates a site-wide response action and groundwater monitoring program to address groundwater impacts from sources other than RCRA-regulated units (i.e. historical releases from piping, product tanks, and non-RCRA solid waste management units. Site-wide LNAPL in Groundwater Regions 1, 2, 3, 4, 5, and 6 is addressed through a program including hydrocarbon system recovery, monitoring, and observation wells (for fluid level monitoring only), point of exposure (POE) wells and attenuation monitoring points (AMPs). A description of the Site-Wide PMZ is provided in Appendix XI.D.6.

Groundwater Region 7 PMZ

LNAPL in the vicinity of the Washburn Tunnel is addressed by recovery wells, POE wells, and AMPs governed by the existing Compliance Plan. A description of the Groundwater Region 7 PMZ is provided in Appendix XI.D.6.

West Property Groundwater PMZs

PRSI proposes a Class 2 permit modification with this renewal to add the West Property Groundwater PMZs to the Compliance Plan. A description of the PMZ and approved monitoring program including Alternate Point of Exposure wells is provided in the West Property Remedial Action Plan in Appendix XI.D.6. The approved RAP proposed decontamination and control of dissolved phase COCs in groundwater within the West Property Groundwater PMZs using monitored natural attenuation (MNA).

The owner or operator may also apply for a the Facility Operations Area (FOA) pursuant to the requirements of 30 TAC 350.131 - 350.135 of the Texas Risk Reduction Program (TRRP) rules, provided the applicant meets the FOA pre-approval process steps 1 through 3 approved by the Commission.

Also, the owner or operator may apply for alternative groundwater Corrective Action Program pursuant 30 TAC 335.151, 335.156 and 30 TAC 350, where there are commingled releases from RCRA-regulated unit from one or more SWMUs, PCO, and/or AOC.

1. Type of Corrective Action Proposed
   From the list below, indicate the type of groundwater corrective action proposed for each hazardous waste unit/area. Discuss in detail if more than one corrective action is to be used in a waste management area. Submit the discussion and descriptions as an attachment to the application. See Appendix XI.D.6.
   a. Groundwater well recovery with surface treatment Recovered groundwater from the Ponds WMA, the Site-Wide PMZ, and the Region 7 PMZ is pre-treated at the facility and sent off-site for final treatment.
   b. Groundwater well recovery/surface treatment/re injection
   c. Groundwater well recovery and disposal
   d. Vapor extraction system
   e. Interceptor trench recovery and disposal
   f. Interceptor trench recovery and surface treatment
   g. In-situ treatment - bioreclamation
   h. In-situ treatment - chemical reaction

i. Barrier walls/encapsulation
j. Permeable treatment beds
k. Other, please describe **Groundwater in the West Property Groundwater PMZs is addressed through MNA.**

2. Program Description

Attach a technical report providing a detailed description of a complete corrective action system including above and below ground equipment/ facilities. Include discussions on the following concerns for each type of corrective action as applicable. **See Appendix XI.D.6.**

a. Recovery Wells

(1) Indicate on a plan view of the waste management area the anticipated location of Recovery Well(s) which would optimize the extraction of the groundwater contaminants.
(2) Indicate on a plan view the estimated radius of influence of each Recovery Well.
(3) Indicate the optimum pumping rate of each Recovery Well determined from the aquifer pump test.
(4) Describe the design of the Recovery Wells and pump system including diameter, construction material, gravel packing, screen slot sizes and patterns, type of pumps and maintenance requirements.
(5) Describe the collection and storage of the contaminated groundwater which is classified hazardous waste (on site storage of hazardous waste shall require compliance with the applicable regulations):
(a) Less than 90-day tanks (see 40 CFR 262.34/40 CFR 265 Subpart J);
(b) Permitted Tanks (see 40 CFR 264 Subpart J);
(c) (Less than 90-day Container Storage Area (see 40 CFR 262.34/40 CFR 265 Subpart I);
(d) Permitted Container Storage Area (see 40 CFR 264 Subpart I); and
(e) Temporary Units (see CFR 264.553).
(6) Describe the treatment and/or final disposition of the hazardous and nonhazardous contaminated groundwater.

b. Vapor Extraction System

(1) Indicate on a plan view of the waste management area the anticipated location of the vapor extraction system which would optimize the extraction of hazardous constituents from the vadose zone.
(2) Describe the construction design of the vapor extraction system in detail, including all diagrams and drawings.
(3) Describe the emission control equipment used to comply with air quality regulations.
(4) Provide the anticipated volatile contaminants to be remediated along with information on the expected effectiveness of the vapor extraction system at the waste management unit.
(5) Provide established treatability data for the proposed design.
(6) Specify the hazardous constituents affected by this type of treatment.

c. Interceptor Trenches
   (1) Indicate on a plan view of the waste management area the anticipated location of the interceptor trench.
   (2) Provide the construction design.
   (3) Describe the procedure for construction.
   (4) Describe the liquid removal and collection system.
   (5) Describe the surface storage and/or treatment of the contaminated groundwater.
   (6) Describe the final disposition of the contaminated groundwater.

d. In-situ Treatment - Chemical Reaction
   (1) Characterize the chemical agents to treat the contaminated groundwater and/or soils in the vadose zone.
   (2) Provide laboratory treatability data.
   (3) Specify the hazardous constituents affected by this type of treatment.
   (4) Specify the reaction by products produced during the chemical reactions.
   (5) Indicate degradation time for each treated hazardous constituent and any resulting chemical reaction by products.
   (6) Describe the potential health risks caused by human exposure to the reaction by products.
   (7) Describe potential damage to wildlife, crops, vegetation and physical structures caused by exposure to reaction by products.
   (8) Describe the persistence and permanence of the potential effects of the reaction by products.
   (9) Describe the method of chemical reactant injection and other important aspects of the system design.

e. In-situ Treatment Bioreclamation
   (1) Describe the type of bacteria most appropriate for the degradation of the hazardous constituents present in the groundwater and/or soil in the vadose zone.
   (2) Describe the nutrients necessary and application frequency to encourage effective bioreclamation.
   (3) Provide laboratory data from treatability studies utilizing the contaminated groundwater and describe any potential hazardous by products.
   (4) Indicate the degradation time for each hazardous constituent affected by this treatment.
   (5) Describe the method of injecting the bacteria and nutrients and describe the delivery system design.

f. Barrier Walls
   (1) Provide laboratory permeability data using the actual contaminated groundwater.
   (2) Describe the barrier wall materials.
   (3) Summarize construction design and installation procedures.

g. Permeable Treatment Beds
   (1) Provide laboratory data of treatability simulations using actual contaminated groundwater in combination with the material proposed to be used in treatment beds.
   (2) Discuss the properties of the treatment material which would make it effective for use at this site.
   (3) Indicate which hazardous constituents will be affected by this treatment. Indicate the reactions which will take place and the resulting reactant by products. Discuss the anticipated lifetime of the permeable treatment beds.
   (4) Provide the construction design and installation procedures.

h. Other

Discuss in detail, any other corrective action (soils and groundwater) not

included above which is proposed for use at the affected waste management area(s).

3. Groundwater Monitoring and Corrective Action Program Description

a. Describe the proposed groundwater monitoring system to be used to monitor corrective action and compliance with the GWPS which includes the following information.

Ponds WMA (Stormwater Pond and Bauxite Pond)

A description of the groundwater monitoring program for the Ponds WMA is provided in Appendix XI.D.3. The program includes background, Point of Compliance (POC), Corrective Action System (CAS), and Corrective Action Observation (CAO) wells. ~~The background, POC, and SUP~~All wells are sampled semiannually. ~~The CAS wells are sampled biannually.~~ Copies of available boring and well completion logs are provided in Appendix VI.

Site-Wide PMZ

A description of the groundwater monitoring program for the Site-Wide PMZ is provided in Appendix XI.D.3. The program includes APOE, CAS, and CAO wells and AMPs which are sampled semiannually. Copies of available boring and well completion logs are provided in Appendix VI.

Groundwater Region 7 PMZ

A description of the groundwater monitoring program for the Groundwater Region 7 PMZ is provided in Appendix XI.D.3. The program includes APOE wells and AMPs along the Washburn Tunnel property boundary. Copies of available boring and well completion logs are provided in Appendix VI.

West Property Groundwater PMZ

A description of the groundwater monitoring program for the West Property Groundwater PMZ is provided in the RAP in Appendix XI.D.6.3. The program includes AMPs and Alternate Point of Exposure wells which are sampled semiannually. Copies of available boring and well completion logs are provided in Appendix VI.

(1) Changes, if applicable, from the current groundwater monitoring program at the waste management unit that will be required to comply with the corrective action monitoring program described in 30 TAC 335.166. This description should address changes concerning: The following changes are proposed to the groundwater monitoring program:

- Updating the financial assurance cost estimates
- Integrating the West Property into the groundwater monitoring program

~~Increasing the time allotted for Groundwater Monitoring from the first 30 days of each first and third quarter to the first 60 days~~

The West Property groundwater monitoring program including methods, analytes, and GWPS have been previously approved under the Texas Risk Reduction Program. ~~The additional time for sampling is requested to allow for weather conditions that inhibit monitoring during the first 30 days of those quarters (freeze conditions during January and tropical events in July). No change is requested in the reporting deadline.~~

(a) Geological and/or hydrogeological information differences since the submittal of the previous application [must submit a Geologic and Hydrogeologic Report in accordance with Section XI.A.4;
(b) Waste management areas/units;
(c) Construction details for monitor wells to evaluate compliance with "Attachment B" well specification requirements;
(d) The number and locations of additional monitor wells [must submit the Monitoring System Plan/Report required by Section XI.D.3.c.(2);
(e) Sample handling, chain of custody, and analytical procedures (also see "Attachment C");
(f) Frequency of monitoring;
(g) Monitoring parameters;
(h) Evaluation of compliance with GWPS (statistical methods);
(i) Other Sampling and Analysis Plan information to be incompliant with "Attachment C";
(j) Compliance period as defined in Section XI.E.1.c. of the application;
(k) Financial assurance; and
(l) An ACL variance under 30 TAC 335.160(b), if applicable.

(2) The number, depth and location of all monitor wells (Background Wells, Point of Compliance Wells, Corrective Action Observation Wells, Supplemental Wells, piezometers, etc.) and all Recovery Wells and complete CP Table V - Designation of Wells by Function. Also, make revisions as applicable to plans referenced in Section XI.D.3.c. **See Appendices XI.D.3, XI.D.6.3, and CP Tables.**

(3) The proposed hazardous constituent monitoring list which is based on constituents that were monitored during detection monitoring (if applicable), constituents detected in accordance with 30 TAC 335.164, and degradational constituents identified in CP Table III accordingly to develop the constituent list for the Corrective Action Monitoring Program. CP Table III shall become part of the final Compliance Plan. **The Ponds WMA, Groundwater Region 7, and Site-Wide Groundwater constituent lists are unchanged from the existing Compliance Plan. The West Property Groundwater PMZs have been added to CP Table III.**

(4) The proposed indicator parameter monitoring list. From the list of constituents and GWPS identified in CP Table III complete CP Table IIIA - Corrective Action Program Table of Indicator Parameters and the Groundwater Protection Standard, accordingly. CP Table IIIA shall become part of the Compliance Plan to be analyzed at least semiannually as required by 30 TAC 335.166(7). **The Ponds WMA, Groundwater Region 7, and Site-Wide Groundwater indicator parameter lists are unchanged from the existing Compliance Plan. The West Property Groundwater PMZ indicator parameters from the approved RAP have been added to CP Table IV.**

(5) Frequency of monitoring should be specified in CP Table VIII **Monitoring will continue semi-annually.**

(6) Provisions for reporting groundwater data at least on an annual

basis should be specified in CP Table VII) ~~Reporting~~ PRSI requests that reporting for the Ponds WMA, Groundwater Region 7, and Site-Wide Groundwater be revised from semi-annual to annual. Monitoring frequency, wells monitored, groundwater recovery, and LNAPL removal for those units remain unchanged. As shown in the Semi-Annual Corrective Action and Compliance Monitoring Report for July 2024 to December 2024, site conditions remain generally stable. The groundwater recovery system maintains hydraulic control and a high percentage of wells within these areas (95% in the Ponds WMA and Site-Wide PMZ, 71% in Groundwater Region 7) show no LNAPL and no exceedances of groundwater protection standards. Therefore, PRSI is recommending a reduction in reporting frequency. ~~will continue semi-annually.~~ Reporting for the West Property Groundwater will be revised from triennial (in the approved RAP) to annual.

(7) Annual determination of contamination plume rate and direction of migration. Determination of the rate and direction of the contaminant plume will be included in the ~~semi-~~annual reports.

(8) Compliance period. Calculate the compliance period as required by 30 TAC 335.162 and 335.165(1)(d). Include calculations and complete CP Table VI - Compliance Period for RCRA-Regulated Units which shall become part of the final Compliance Plan The compliance period for the Ponds WMA is included in CP Table VI in Appendix VI.D.3 and is unchanged from the 2015 Compliance Plan. The compliance period has ended; however, as the Ponds WMA is included in a Groundwater Corrective Action program, the compliance date is extended in accordance with 30 TAC 333.162(c) until PRSI can demonstrate that the groundwater protection standard has not been exceeded for a period of three consecutive years.

b. Proposed methods of evaluating the effectiveness of the corrective action in the saturated and vadose zone. Not applicable.

c. Submit the following plans and reports.

(1) Current Sampling and Analysis Plan The Sampling and Analysis Plan must include information required by 30 TAC 335.163(4) and 335.163(5) and 40 CFR Subpart 270.30(j). For guidance, please see "Attachment C" to the application. See Appendix XI.C.1.b and XI.D.6.3.

(2) Groundwater Recovery and Monitoring System Plan At a minimum, the plan must include: See Appendices XI.D.6.1 through 3.

(a) Recovery System Plan The applicant should propose a recovery system design that will achieve the performance requirement to protect human health and the environment. The plan should provide detailed plans, information and specifications on the recovery system's design and well installation specifications. All new recovery wells must be installed in accordance with applicable specifications outlined in "Attachment B", unless an alternative well design is approved by the agency prior to installation of the well. The Recovery System Plan must include Recovery System Design and Specifications Certified by a Texas Registered Professional Engineer. The certification must be sealed by

a licensed Professional Engineer, with current license, along with the Registered Engineering Firm's name and Registration Number as required by the Texas Engineering Practice Act.;

(b) Monitoring System Plan If the applicant is proposing a monitoring well or a monitoring system in the application, the applicable well installation specifications outlined in "Attachment B" of this application should be followed. All new monitoring wells must be installed in accordance with the specifications outlined in "Attachment B", unless an alternative design is approved by the agency prior to installation. If the applicant proposes as part of the monitoring system, any well (existing or proposed) that does not meet or exceed the requirements outlined in "Attachment B", then the proposed alternative design must be described in detail in the Monitoring System Plan and must be submitted with this application. The Monitoring System Plan must include:

(i.) Monitoring System Design and Specifications Certified by a qualified engineer and/or geologist which provides detailed plans and specifications on the monitoring system design; and

(ii.) Well Drilling and Well Casing Specifications Certified by a qualified engineer and/or geologist which provides details on well casing specification, drilling logs and reports.

(3) Current Geologic and Hydrogeologic Report - Provide a report per Section XI.A.4 of this application discussing the geologic and hydrogeologic conditions of the facility and the specific area affected by the waste management areas. This report should include the most up-to-date information from which the design of the groundwater monitoring system was based. **See Appendix VI.**

4. Waste Management Units/Areas Monitored Under Corrective Action Programs

a. Delineate and identify the following for each waste management unit/area in the proposed groundwater monitoring and corrective action programs.

(1) Boundary of the waste management unit and, if applicable, the proposed waste management area which includes more than one waste management unit (identify all waste management units which are included in the waste management area). These waste management units/areas subject to corrective action pursuant to 30 TAC 335.166 and 335.167 should be listed in CP Table I - Waste Management Units and Areas Subject to Groundwater Corrective Action and Compliance Monitoring. CP Table I shall become part of the final Compliance Plan. **See Appendix XI-CP Tables.**

(2) The proposed point of compliance (30 TAC 335.161), point of exposure wells, or alternate point of exposure wells. **See Appendix XI-CP Tables and XI-CP Attachment A.**

(3) Any proposed monitor wells such as supplemental wells, observation wells, background wells, etc. If appropriate the groundwater monitoring system should have a sufficient number

of wells to monitor the downgradient extent of the plume. See Appendix XI-CP Tables and XI-CP Attachment A.

(4) Features which may serve as conduits for subsurface contamination. There are underground pipelines, electrical conduits, ditches, and sewers throughout the facility that could serve as conduits.

(5) Corrective action system. The corrective action systems for the Ponds WMA, Site-Wide PMZ, and Groundwater Region 7 PMZ are identified in Appendix XI.D.3 and shown in Appendix XI-CP Attachment A.

b. For each waste management unit/area in the proposed groundwater monitoring system, submit the locations of individual waste management unit/area monitor wells (existing or proposed) and any soil borings (plugged and unplugged) specifically drilled for assessment of contamination. These individual monitor wells shall be identified by respective well number on a plan view drawing and only the background, point of compliance, point of exposure wells and/or alternate point of exposure wells should be indicated in CP Table V - Designation of Wells by Function. The plan view map depicting the location of individual monitoring wells for corrective action monitoring should be labeled as "CP Attachment A, sheet xx of xx" in the text box. The title box should also include reference to the facility name, Permit/Compliance Plan Number, Solid Waste Registration Number, Unit

Description or name with Notice of Registration (NoR) Unit No. 0000. The "CP Attachment A" map(s) and CP Table V shall also become part of the final Permit/Compliance Plan. Plan view drawings are provided in Appendix XI-CP Attachment A.

5. Waste Management Units/Areas Addressed Under Other Corrective Action Programs -Facility Operations Area (FOA), specific to the requirements of 30 TAC 350.131 - 350.135. The Permittee should also complete Sections XI.D.4. for other units not addressed by the FOA that may require corrective action outside the FOA boundary. For other units not addressed by the FOA, either within the FOA or outside the FOA which may require compliance monitoring, the Permittee should complete Section XI.C. of this application accordingly.

Not applicable.

a. Provide an approved version of the FOA Qualifying Criteria Checklist and evidence that Steps 1 through 3 of the FOA pre-approval process has been approved by the Commission.

b. Provide a discussion on exceptions to the TRRP rule requested.

c. Provide a summary of the SWMUs/AOCs that will be addressed within the FOA boundary and a discussion of the multiple sources of COCs present and how FOA will better address these sources.

d. Provide maps of appropriate scale depicting the following (maps may be combined where appropriate):

(1) The number, location and type of monitoring points in each stratigraphic unit to be monitored individual monitoring wells should be identified by respective well number on a plan view drawing, to include the background, Point of Compliance (POC), Point of Exposure (POE), FOA Boundary of Compliance wells, FOA piezometers or supplemental wells, Corrective Action Observation ((CAO), Corrective Action System (CAS) wells that are applicable for FOA monitoring program should be labeled as "CP

Attachment A, sheet no xx of xx" in the title box. The title box should also include reference to the facility name, Permit/ Compliance Plan Number (00000), TCEQ Solid Waste Registration Number and Unit Description or Name. The "CP Attachment A" map(s) shall become part of the final Permit/Compliance Plan.

(2) HWMUs/SWMUs/AOCs addressed
(3) Surrounding land use
(4) FOA lateral boundaries
(5) Potential source areas
(6) Potentiometric surface of all relevant transmissive units
(7) Surrounding water wells
(8) Extent of known contamination in each transmissive unit
(9) Areas of potential ecological impact
(10) Known occurrences of NAPL or DNAPL in each transmissive units
(11) FOA access control components

e. Provide cross-sections in accordance with Section XI.A.4. depicting the following (maps may be combined where appropriate);
   (1) The vertical boundaries of the FOA;
   (2) The vertical extent of contamination;
   (3) Groundwater level elevations for each transmissive unit.

f. Provide tabulated information for;
   (1) Results of Appendix IX GW sampling.
   (2) Proposed PCLs for each hazardous constituent and principal degradational constituent for each monitoring point with supporting documentation (including a discussion of exposure pathways) should be listed in CP Table III - CORRECTIVE ACTION PROGRAM Table of Detected Hazardous and Solid Waste Constituents and the Groundwater Protection Standard. CP Table III shall become part of the final Compliance Plan.
   (3) The proposed indicator parameter monitoring list. From the list of constituents and GWPS identified in CP Table IIIA. CP Table IIIA shall become part of the Compliance Plan to be analyzed at least semiannually as required by 30 TAC 335.166(7).
   (4) Only the background, POC, POE, FOA Boundary of Compliance wells should be listed in CP Table V which shall become part of the final Permit/Compliance Plan.

g. Provide a discussion of the types of corrective action that will be employed to address contaminated media.
h. Provide detailed descriptions of GW recovery and other remedial technologies such as vapor extraction, interceptor trenches, hydraulic containment, barrier walls, etc., including radius of influence, estimated optimum recovery rates, location of collection, storage or disposal facilities.
i. Provide a detailed description of the ground water monitoring system including placement of monitoring wells, hydrogeologic characteristics of monitored units and well completion details.
j. Provide a Sampling and Analysis plan for the proposed FOA that includes development of COCs to be monitored, sampling methodology, sample handling procedures, sampling frequency and statistical procedures for evaluating analytical results (Appendix C).
k. Propose a methodology for evaluating the effectiveness of remedial measures and potential remedial system enhancements.
l. Propose a reporting schedule to provide updated information on the installation and operation of remedial and monitoring systems.
m. Provide Financial Assurance in accordance with Section XI.E.
n. Provide draft language intended to comply with the deed notification

requirements of 30 TAC 350.111 and 350.135(a)(11).

o. Provide a summary of the approved workers protection plan.
p. Provide a discussion of areas of ecological impact, if any, and development of associated Protective Concentration Limits (PCLs).
q. Provide a discussion of how NAPL occurrences, if any, will be addressed inside and outside the FOA.
r. Provide a schedule of implementation for items not completed at the time of application See also Section XI.D.8.

6. Waste Management Units/Areas Monitored Under Corrective Action Programs - Plume Management Zone (PMZ) **See Appendices XI.D.6.1 through XI.D.6.3.**

a. Please provide a summary of the HWMUs and SWMUs/AOCs that will be addressed within the PMZ boundary.
b. Please provide a discussion of the multiple sources of COCs present and how PMZ will better address these sources.
c. Please provide maps of appropriate scale depicting the following (maps may be combined where appropriate);
   (1) HWMUs/SWMUs/AOCs addressed
   (2) surrounding land use
   (3) PMZ lateral boundaries
   (4) potential source areas
   (5) Potentiometric surface of all relevant transmissive units
   (6) Surrounding water wells
   (7) extent of known contamination in each transmissive unit
   (8) number, location and type of monitoring points in each stratigraphic unit to be monitored
   (9) Areas of potential ecological impact
   (10) known occurrences of LNAPL or DNAPL in each transmissive unit

d. Please provide sufficient cross-sections depicting the following (maps may be combined where appropriate);
   (1) The vertical boundaries of the PMZ;
   (2) The vertical extent of contamination;
   (3) potentiometric surfaces for each transmissive unit.

e. Please provide tabulated information for;
   (1) history of all relevant units or AOCs;
   (2) summary of hydrogeologic data for each affected transmissive unit;
   (3) results of Appendix IX GW sampling;
   (4) proposed PCLs for each constituent for each monitoring point (Point of Exposure wells, alternate point of exposure wells, etc.) with supporting documentation (including a discussion of exposure pathways). This should also include the designation/ establishment of sufficient number of Attenuation Monitoring Points (AMPs) beginning at an appropriate hydraulically upgradient location within the groundwater protective concentration level exceedance (PLCE) zone and continuing down the approximate central flow path of the constituent of concern (COC) in the downgradient extent of the Plume Management Zone(s) in accordance with 30 TAC 350.33(f)(4)(D).
   (5) Establish/Calculate Attenuation Action Levels (AALs) (critical PCLs) for each attenuation monitoring point in accordance with 30 TAC 350.33(f)(4)(D)(ii). The established AALs (critical PCLs) for each AMP well should be graphically presented in table format on the plan view map depicting the location of individual monitoring wells (including AMP wells) for corrective action

monitoring labeled "CP Attachment A, Sheet xx of xx", referenced in XI.D.4.b.

f. Please provide a discussion of the types of corrective action that will be employed to address contaminated media.
g. Please provide detailed descriptions of GW recovery and other remedial technologies such as vapor extraction, interceptor trenches, hydraulic containment, barrier walls, etc., including radius of influence, estimated optimum recovery rates, location of collection, storage or disposal facilities.
h. Please provide a detailed description of the groundwater monitoring system including placement of monitoring wells, hydrogeologic characteristics of monitored units and well completion details.
i. Please provide a Sampling and Analysis plan for the proposed PMZ that includes development of COCs to be monitored, sampling methodology, sample handling procedures, sampling frequency and statistical procedures for evaluating analytical results.
j. Please propose a methodology for evaluating the effectiveness of remedial measures and potential remedial system enhancements.
k. Please propose a reporting schedule to provide updated information on the installation and operation of remedial and monitoring systems.
l. Please provide a thorough detailed description of an estimate of all costs that will be incurred by implementing, operating, and maintaining the corrective action and monitoring systems addressed by the compliance plan.
m. Please provide draft language intended to comply with the deed notification requirements of 350.111, and schedule to verify compliance with institutional control requirements in accordance with 30 TAC 350.31(g) which provides notice of the existence and location of the PMZ and which prevents exposure to groundwater from this zone until such a time as constituents of concern may be reduced to below the GWPS.
n. Schedule for notification requirements if an unexpected event occurs, or a condition is detected, during post-response action care period which indicates that additional response actions will be required at an affected property pursuant to 30 TAC 350.33(k).
o. Please provide a summary of the approved soil response action plan.
p. Please provide a discussion of areas of ecological impact, if any, and development of associated PCLs.
q. Please provide a discussion of how NAPL occurrences, if any, will be addressed inside the PMZ.
r. Please provide a schedule of implementation for items not completed at the time of application {See also Section XI.D.8.}

7. Waste Management Units/Areas Monitored Under Alternative Corrective Action Program for Co-mingled plumes Alternative groundwater Corrective Action Program apply, pursuant 30 TAC 335.151, 335.156 and 350, for commingled release from RCRA-regulated unit and from one or more SWMUs and/or AOC.
Not applicable.

a. Complete Sections XI.D.1. through 4.;
b. In addition to the CP Attachment A maps in Section XI.D.4.b., CP Attachment A maps should clearly depict those waste management unit or areas of the facility which have commingled plumes and the alternative corrective action applies.
c. Please provide a schedule of implementation for items not completed at the time of application {See also Section XI.D.8.}

8. Implementation Schedule
Itemize and discuss, in detail, the estimated time schedule necessary for any testing and assessments, system design, construction and installation, and final

implementation of the groundwater monitoring program for each Regulated Unit and solid waste management unit. If the schedule of implementation for items are not completed at the time of the application or are not completed at the time of issuance of the final draft Compliance Plan, then the items should be added to the CP Table VIII - (Compliance Schedule) of the application. **The groundwater monitoring program is ongoing.**

E. Cost Estimates For Financial Assurance

As required by 30 TAC 335.156 and 335.167, the applicant must provide cost estimates for groundwater monitoring and corrective action to determine the amount of financial assurance. Please complete the applicable parts of this form. Cost estimates should be filled out for each proposed corrective action/monitoring system at the site; or any additional corrective action system not covered in this Part. Please note, the Executive Director may request from the applicant documentary evidence for cost estimates.

If an item is not applicable, please mark it NA. Please Complete the following tables, as applicable:

Completed tables are included in Appendix XI.E. The Financial Assurance Cost Estimate Summary is as follows:

Total Cost (Ponds WMA)	**$~~746~~1,112,000**
Total Cost (Groundwater Region 7)	**$ ~~541~~809,000**
Total Cost (Site-wide PMZ)	**$~~852~~1,144,000**
Total Cost (Recovery Wells)	**$ ~~760~~116,000**
Total Cost (Moat)	**$ ~~234~~350,000**
Total Cost (West Property)	**$ ~~543~~1,127,000**
Grand Total	**$~~3,676~~5,128,000**

1. CP Table XI.E. - General Information
2. CP Table XI.E.1. - Corrective Action Program Cost Estimate
3. CP Table XI.E.2.e - Groundwater Monitoring Cost Estimate
4. CP Table XI.E.3. - Financial Assurance Summary

Attachment A

Alternate Concentration Limits

Alternate Concentration Limits (ACLs) must be submitted by hazardous waste facility owners or operators who seek ACLs for any hazardous constituent as provided by 30 TAC 335.160(b) as a part of a compliance monitoring or corrective action program. An ACL demonstration should follow the guidance provided in this attachment. Compliance Plan Application, Section XI.B.2.b. outlines when an ACL demonstration must be conducted. Where possible in "Attachment A", the applicant may copy information previously submitted to the Commission and reference the information submitted in other Sections (Sections I and XI.B. through E.) of this Compliance Plan Application.

Alternate Concentration Limit Demonstration

An ACL petition is based on a demonstration that hazardous constituents detected in the groundwater will not pose a substantial present or future threat to human health or the environment at the ACL levels. Potential adverse effects on both groundwater quality and hydraulically connected surface water quality must be addressed. Using Environmental Protection Agency published lists of 40 CFR Part 264 Appendix IX hazardous constituents, the applicant must submit a list of all contaminants in the groundwater. For all the petitioned ACL constituents, the applicant must address all known synergistic and additive effects on human health and the environment to develop appropriate ACL levels.

Required Information for Alternate Concentration Limits

In addition to rule specific requirements (i.e., 30 TAC Chapter 335 Subchapter S RRR, or 30 TAC Chapter 350 TRRP), the following items must be addressed for each hazardous constituent for which an alternate concentration is sought (CP Tables III and IV, XII.B.). If the information required in this part has been furnished in other parts of Compliance Plan Application, please provide an adequate reference.

1. Potential adverse effects on groundwater quality, considering:
   a. The physical and chemical characteristics of the waste in the Regulated Unit, Solid Waste Management Unit(SWMU) or Area of Concern (AOC), including its potential for migration;
   b. The hydrogeological characteristics of the facility and surrounding land;
   c. The quantity of groundwater r and the direction of groundwater flow;
   d. The proximity and withdrawal rates of groundwater users;
   e. The current and future uses of groundwater in the area;
   f. The existing quality of groundwater, including other sources of contamination and their cumulative impact on the groundwater quality;
   g. The potential for health risks caused by human exposure to waste constituents;
   h. The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and,
   i. The persistence and permanence of the potentially adverse effects.

2. Potentially adverse effects on hydraulically connected surface water quality, considering:
   a. The volume and physical and chemical characteristics of the waste in the Regulated Unit, Solid Waste Management Unit (SWMU) or Area of Concern (AOC);

b. The hydrogeological characteristics of the facility and surrounding land;
c. The quantity and quality of groundwater, and the direction of groundwater flow;
d. The patterns of rainfall in the region;
e. The proximity of the Regulated Unit to surface waters;
f. The current and future uses of surface waters in the area and any water quality standards established for those surface waters;
g. The existing quality of surface water, including other sources of contamination and the cumulative impact on surface water quality;
h. The potential for health risks caused by human exposure to waste constituents;
i. The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and,
j. The persistence and permanence of the potentially adverse effects.

Attachment B

Well Design And Construction Specifications

The following well design and construction specifications should be used as guidance when designing a groundwater Compliance Monitoring Program (Section XI.C.) or a Corrective Action Program (Section XI.D.). This guidance is provided to establish minimum well design and construction specifications for the Compliance Plan.

1. Well drilling methods that minimize potential adverse effects on the quality of water samples withdrawn from the well and that minimize or eliminate the introduction of foreign fluids into the borehole must be utilized.

2. All wells shall be constructed such that the wells can be routinely sampled with a pump, bailer, or alternate sampling device. Piping associated with recovery wells should be fitted with sample ports or an acceptable alternative sampling method to facilitate sampling of the recovered groundwater on a well by well basis.

3. Above the saturated zone the well casing may be two (2) inch diameter or larger schedule 40 or 80 polyvinyl chloride (PVC) rigid pipe or stainless steel or polytetrafluoroethylene (PTFE or "teflon") or an approved alternate material. The PVC casing must bear the National Sanitation Foundation logo for potable water applications (NSF pw). Solvent cementing compounds shall not be used to bond joints and all connections shall be flush threaded. In and below the saturated zone, the well casing shall be stainless steel or PTFE.

   PVC or fiberglass reinforced resin may be used as an alternate well casing material in and below the saturated zone provided that it yields samples for groundwateruality analysis that are unaffected by the well casing material.

4. Any well that has deteriorated due to incompatibility of the casing material with the groundwater contaminants or due to any other factors must be replaced.

5. Well casings and screens shall be steam cleaned prior to installation to remove all oils, greases, and waxes. Well casings and screens made of fluorocarbon resins shall be cleaned by detergent washing.

6. Screen length shall not exceed ten (10) feet within a given transmissive zone unless otherwise approved by the executive director. Screen lengths exceeding ten (10) feet may be installed in groundwater recovery or injection wells to optimize the groundwater remediation process in accordance with standard engineering practice.

7. The intake portion of a well shall be designed and constructed so as to allow sufficient water flow into the well for sampling purposes and minimize the passage of formation materials into the well during pumping. The intake portion of a well shall consist of commercially manufactured stainless steel or PTFE screen or approved alternate material. The annular space between the screen and the borehole shall be filled with clean siliceous granular material (i.e., filter pack) that has a proper size gradation to provide mechanical retention of the formation sand and silt. The well screen slot size shall be compatible

with the filter pack size as determined by sieve analysis data. The filter pack should extend no more than three (3) feet above the well screen. A silt trap, no greater than one (1) foot in length, may be added to the bottom of the well screen to collect any silt that may enter the well. The bottom of the well casing shall be capped with PTFE or stainless steel or approved alternate material.

Groundwater recovery and injection wells shall be designed in accordance with standard engineering practice to ensure adequate well production and accommodate ancillary equipment. Silt traps exceeding one (1) foot may be utilized to accommodate ancillary equipment. Well heads shall be fitted with mechanical wellseals, or equivalent, to prevent entry of surface water or debris.

8. A minimum of two (2) feet of pellet or granular bentonite shall immediately overlie the filter pack in the annular space between the well casing and borehole. Where the saturated zone extends above the filter pack, pellet or granular bentonite shall be used to seal the annulus. The bentonite shall be allowed to settle and hydrate for a sufficient amount of time prior to placement of grout in the annular space. Above the minimum two (2) foot thick bentonite seal, the annular space shall be sealed with a cement/bentonite grout mixture. The grout shall be placed in the annular space by means of a tremie pipe or pressure grouting methods equivalent to tremie grouting standards.

   The cement/bentonite grout mixture or TCEQ approved alternative grout mixture shall fill the annular space to within two (2) feet of the surface. A suitable amount of time shall be allowed for settling to occur. The annular space shall be sealed with concrete, blending into a cement apron at the surface that extends at least two (2) feet from the outer edge of the monitor well for above ground completions. Alternative annular space seal material may be proposed with justification and must be approved by the executive director prior to installation.

   In cases where flush to ground completions are unavoidable, a protective structure such as a utility vault or meter box should be installed around the well casing and the concrete pad design should prevent infiltration of water into the vault. In addition, the following requirements must also be met 1) the well/cap juncture is watertight; 2) the bond between the cement surface seal and the protective structure is watertight; and 3) the protective structure with a steel lid or manhole cover has a rubber seal or gasket.

9. Water added as a drilling fluid to a well shall contain no bacteriological or chemical constituents that could interfere with the formation or with the chemical constituents being monitored. For groundwater recovery and injection wells, drilling fluids containing freshwater and treatment agents may be utilized in accordance with standard engineering practice to facilitate proper well installation. In these cases, the water and agents added should be chemically analyzed to evaluate their potential impact on in-situ water quality and to assess the potential for formation damage. All such additives shall be removed to the extent practicable during well development.

10. Upon completion of installation of a well, the well must be developed to remove any fluids used during well drilling and to remove fines from the formation to provide a particulate free discharge to the extent achievable by accepted completion methods and by commercially available well screens. Development

shall be accomplished by reversing flow direction, surging the well or by air lift procedures. No fluids other than formation water shall be added during development of a well unless the aquifer to be screened is a low yielding water bearing aquifer. In these cases, the water to be added should be chemically analyzed to evaluate its potential impact on in-situ water quality, and to assess the potential for formation damage.

For recovery and injection wells, well development methods may be utilized in accordance with standard engineering practice to remove fines and maximize well efficiency and specific capacity. Addition of freshwater and treatment agents may be utilized during well development or re development to remove drilling fluids, inorganic scale or bacterial slime. In these cases, the water and agents added should be chemically analyzed to evaluate their potential impact on in-situ water quality and to assess the potential for formation damage. All such additives shall be removed to the extent practicable during well development.

11. Each well shall be secured and/or designed to maintain the integrity of the well borehole and groundwater.

12. The above ground portion of the well must be protected by bumper guards and/ or metal outer casing protection when wells are located in traffic areas or outside the secured plant area.

13. The attached **Table of Well Construction Details (Item 13)** is to be completed or updated for each well installed and kept on site. Items in the table that require a yes or no answer indicate diagrams plans, or procedures that shall be kept on site and made available to inspection. The completed table and other records shall include all the following information:

    - name/number of well (well designation);
    - intended use of the well(sampling, recovery, etc.);
    - date/time of construction;
    - drilling method and drilling fluid used;
    - well location (+ 0.5 ft.);
    - bore hole diameter and well casing diameter;
    - well depth (+ 0.1 ft.);
    - drilling and lithologic logs;
    - depth to first saturated zone;
    - casing materials;
    - screen materials and design;
    - casing and screen joint type;
    - screen slot size/length;

- filter pack material/size;
- filter pack volume (how many bags, buckets, etc.);
- filter pack placement method;
- sealant materials;
- sealant volume (how many bags, buckets, etc.);
- sealant placement method;
- surface seal design/construction;
- well development procedure;
- type of protective well cap;
- ground surface elevation (+ 0.01 ft. MSL);
- top of casing elevation (+ 0.01 ft. MSL); and,
- detailed drawing of well (include dimensions).

14. Construction or plugging and abandonment of each well shall be completed in accordance with the requirements of 16 TAC Chapter 76 and must be reported/ certified to the TCEQ that such proper construction or plugging and abandonment has occurred following installation or plugging and abandonment. Well completion logs for each newly installed or replaced well shall be included with the report. The certification shall be prepared by a qualified geologist or geotechnical engineer. Each well certification shall be accompanied by a certification report, including an accurate log of the soil boring, which thoroughly describes and depicts the location, elevations, material specifications, construction details, and soil conditions encountered in the boring for the well. A copy of the certification and certification report shall be kept on site, and a second copy shall be submitted to the executive director.

15. The well number must be clearly marked and maintained on each well at the site.

16. The elevation of the top of each well casing must be measured in feet above mean sea level to the nearest 0.01 foot.

17. Wells must be replaced at any time the well integrity or materials of construction or well placement no longer enable the well to yield samples representative of groundwater quality.

18. Soil test borings shall be plugged and wells removed from service with a cement/bentonite grout mixture so as to prevent the preferential migration of fluids in the area of the borehole. Certification of each plugging shall be reported in accordance with Provision 14. The plugging of wells shall be in accordance with 16 TAC Chapter 76 dealing with Well Drilling, Completion, Capping and Plugging.

19. A well's screened interval shall be appropriately designed and installed to meet the well's specific objective (i.e., either DNAPL, LNAPL, both, or other objective of the well). All wells designed to detect, monitor, or recover DNAPL must be drilled to intercept the bottom confining layer of the aquifer. The screened interval to detect DNAPL should extend from the top of the lower confining layer to above the portion of the aquifer saturated with DNAPL. The screened interval for all wells designed to detect, monitor, or recover LNAPL must extend high enough into the vadose zone to provide for fluctuations in the seasonal water table. In addition, the sandpacks for the recovery or monitoring well's screened interval shall be coarser than surrounding media to ensure the movement of NAPL to the well.

Attachment C - Sampling And Analysis Plan

Introduction and Purpose

This Attachment was prepared for the purpose of providing guidance for the preparation of a Groundwater Sampling and Analysis Plan (SAP) to meet the requirements of 30 Texas Administrative Cod (TAC) 335.163(4) and (5) and also 40 CFR 270.30(j). This guidance is based on the publication, RCRA Groundwater Monitoring: Draft Technical Guidance (TEGD Update) (November 1992, USEPA), and its updates, and is not intended to be rule or policy, or include all acceptable practices.

When preparing the SAP, the applicant may insert copies of areas of the Compliance Plan Application already completed which provides any necessary information for completion of the SAP. The SAP should include the information described in the following sections. When certain sections are not applicable, please provide justification for omission from the SAP.

1. Pre Field Activity
   a. The log book format should be outlined in the SAP and should contain at a minimum:
      - the names of those conducting the sampling event;
      - the purpose and provision(s) of the compliance plan requiring the sampling event;
      - weather conditions at time of sampling;
      - date and time of collection;
      - well identification;
      - integrity of well;
      - monitoring well measurements, including: total well depth; static water level depth; measurement techniques; height of water column; well volume; and, notation of the presence or absence of accumulated silt (including thickness and measurement procedures);
      - notation of the presence or absence of NAPLs (including thickness and detection method);
      - well purging procedures, including equipment, purge volume, pumping rate, and well purge time;
      - sampling methods, including well sampling sequence, sampling equipment and withdrawal procedures;
      - visual and measured water quality parameters required for analysis, such as appearance, pH, conductivity, temperature and turbidity; and,
      - sample preservation and handling procedures, including types of sample bottles, sample identification numbers, preservatives used, and internal temperature of field and shipping containers.
   b. The SAP should reference the Provisions or Tables within the Compliance Plan regarding monitor well designations, parameters to be monitored, and sampling frequency, rather than utilizing detailed lists.
   c. The SAP should include examples of the log book format, chain of custody, and information to be included on the container labels and seals.
   d. The SAP should reference both the Health and Safety Plan, and Field Emergency Contingency Plan. These Plans should be checked to determine if they adequately address health and safety issues that may occur during a sampling event.
2. Prior to Purging Well

a. A. Procedures for evaluating the physical condition and integrity of the well should include:
   - inspecting the casing and cap for cracks, signs of deterioration or tampering;
   - determination if the cap and monitoring well are secure;
   - inspecting the well pad for cracks, or signs of deterioration, erosion, settling, and/or animal and insect burrowing; and,
   - where appropriate, inspect any dedicated equipment for signs of cleanliness, structural integrity and deterioration.

b. Procedures and equipment used for measuring groundwater elevations, well depths, silt accumulation, and Non Aqueous Phase Liquids (NAPLs) should be included in the SAP. Water levels should be measured from the surveyed datum on the top of the well casing, with a precision of ±0.01 foot. If present, accumulated silt and light/dense NAPLs should be measured for thickness.

c. Procedures for monitoring site specific weather conditions at the time of sampling should be incorporated into the SAP, including precipitation (when applicable), temperature, and approximate wind speed and direction.

3. Sampling Preparation Activity

a. Well purging methods:

(1) A sampling contingency plan should be developed for wells which are purged to dryness or purged such that full recovery exceeds two hours. In such instances, samples should be taken as soon as a sufficient volume of groundwater has entered the well to enable the collection of the necessary groundwater samples.

(2) In all instances of purging, the SAP should describe in detail the equipment used (dedicated or non dedicated), purging rate, and the method for determining volume purged.

(3) Although purging and sampling by bailers is acceptable, the EPA recommends the use of dedicated pumping equipment designed for low flow rates.

(4) When utilizing micropurging methods, the purge rate may range between 0.1 to 0.5 liter/minute. During micropurging, drawdown should not exceed 0.1 meter. The applicant should provide justification for any alternate sampling procedure. The SAP should also specify the well screen interval at which the pump intake is placed and a copy of the boring log for each well utilizing micropurging. In line measurements of redox, dissolved O2 and turbidity during purging of groundwater should stabilize within 10% over at least two measurements prior to sampling.

b. Field filtering of groundwater samples should not be conducted unless the applicant has provided a justification and field filtration is approved by the TCEQ. If samples are field filtered, a 10 micron filter should be used while still fulfilling the data quality objectives for the groundwater monitoring program.

c. The container type, size, and labeling method for each procedure performed should be referenced and/or tabulated in the SAP.

d. Sample blanks, field blanks, trip blanks and split sampling procedures, including frequency and preservation should be specified in the SAP as quality control checks for each sampling event. The preparation, analysis,

and evaluation of replicates, duplicates and spikes should also be included.

4. Well Sampling
   a. Well sampling equipment, collection procedures, and sampling sequence of wells, should be specified in the SAP. The SAP should include sampling equipment that is constructed of inert material, which should not alter analyte concentration due to loss of analyte via absorption, or gain via desorption, degradation or corrosion.
   b. Field QA/QC and sample preservation methods used to control pH, chemical addition and refrigeration of samples should be described in the SAP and follow the methods described in the current editions of EPA Report SW 846, "Test Methods for Evaluating Solid Waste" and American Society for Testing and Materials (ASTM) Standard Test Methods or other methods accepted by the TCEQ. The SAP should indicate that chemical preservatives are to be added to samples in the field and not in the laboratory. The SAP should indicate that coolants used for refrigerating samples need to be contained (e.g. blue ice).
   c. Procedures for sampling inorganics and volatile/semi volatile organics should be described in the SAP and follow the methods of SW 846 and ASTM or other methods accepted by the TCEQ.
5. Post Sampling Activity
   a. Decontamination procedures should be included in the SAP when dedicated equipment is not used for purging and sampling, or when dedicated equipment is stored outside the well. The procedures should include disassembly, cleaning of equipment, packaging and storage of equipment when not in use.
   b. Analytical methods and holding times should be tabulated in the SAP in accordance with SW 846 and ASTM or other methods accepted by the TCEQ.
   c. Chain of custody and shipping procedures should be described and intended to prevent misidentification of samples, to identify and prevent tampering of the samples during shipping and storage, and allow easy tracking of the shipment from the field to final analyses. A Chain of Custody Form should accompany each sample shipment and include the following information:
      - sample identification number;
      - signature of collector;
      - date and time of collection;
      - sample type (e.g. groundwater);
      - identification of sampling point (well);
      - number of containers;
      - parameters requested for analysis;
      - preservatives used;
      - signature(s) of person(s) involved in the chain of possession;
      - inclusive dates and time of possession;
      - internal temperature of shipping container when samples were sealed into the container for shipping; and,
      - internal temperature of container upon opening in the laboratory.

Samples should be shipped in coolers or similar containers designed to keep samples at a constant 4˚C and prevent breakage. Containers used for sample shipment should be

sealed with the seal signed and dated by the sampler.

d. Disposal methods of contaminated equipment, wash water and purged groundwater should be described.

e. Laboratory QA/QC procedures should include control samples as defined in Chapter I of SW 846. An appropriate statistical method/procedure should be used to monitor and document performance and to implement an effective program to resolve testing problems (instrument maintenance). Data from the control samples (i.e. spiked samples, duplicates and blanks) should be used as a measure of performance or as an indicator of potential source of cross contamination (i.e. from instrumentation). QA/QC documentation for reporting values should be tabulated on laboratory data sheet and include: target analyte; unit of measure (e.g. ppm); method analyses; and, time/dates of sample collection and analyses.

XII. Hazardous Waste Permit Application Fee

Provide all Part B responsive information in Appendix XII. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

In accordance with 30 TAC 305.53, complete Tables XII.A. - Hazardous Waste Units (For Application Fee Calculations) and XII.B. - Hazardous Waste Permit Application Fee Worksheet. Use the following information in calculating your fee. The application fee will be non-refundable once an initial review of the application has been completed. 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 necessary. **Tables XII.A and XII.B are included in Appendix XII.**

A. The minimum permit application fee for a permit or a permit renewal for each hazardous waste facility to be used for Storage, Processing, Disposal, or Closure/Post-Closure Care (disposal has already occurred) of hazardous waste shall be $2,000, plus notice fee, and the maximum shall be $50,000, calculated according to these instructions:

1. Process Analysis - $1,000.00.

2. Management/Facility Analysis - $500.00.

3. A facility unit(s) analysis of $500 per unit is charged for the following:

   a. each cell of a landfill (note that multiple cells that are identical in type and use are subject to a single $500 fee);

   b. tanks and container storage areas (note that multiple tanks and container storage areas that are identical in type and use are subject to a single $500 fee)

   c. identical in type and use means the following:

      (1) made of the same material and same design;
      (2) the same size/capacity within + 10%;
      (3) store the same waste (as identified by USEPA hazardous waste number - 40 CFR 261 Subparts C & D); and
      (4) have the same management characteristics (e.g., storage only).

   d. Each incinerator, boiler/industrial furnace unit, surface impoundment, waste pile, land treatment unit, drip pad, miscellaneous unit, or containment building.

4. Site Evaluation - $100 per acre of surface used for hazardous waste management up to 300 acres. No additional fee thereafter. This shall be calculated as any acreage which will be permitted to manage hazardous waste. This shall include, for example, the entire area within the secondary containment of a tank farm, the area within a fence that surrounds individual units (other than the facility fence), or the area defined by the toe of the dike surrounding a landfill or impoundment, etc.

5. An applicant shall also include with each initial application a fee of $50 to be applied toward the cost of providing the required notice. An additional notice

fee of $15 is required with each application for renewal.

B. The application fee for a major amendment or a Class 2 or 3 modification to a hazardous waste permit for operation, closure, or post-closure care is subject to the fees listed below:

1. A management/facility analysis fee of $500.

2. The notice fee is $50.

3. If a unit is added or a unit area is expanded for any purpose, $100 per additional acre is assessed, until the total additional acreage reaches 300 acres.

4. If one or more of the following reports are added or are significantly revised, the process analysis fee of $1000 is assessed:

   a. waste analysis plan;

   b. site-specific or regional geology report;

   c. site-specific or regional geohydrology report;

   d. groundwater and/or unsaturated zone monitoring;

   e. closure and/or post-closure care plan; or

   f. RCRA Facility Assessments (RFAs), or corrective action reports;

   g. Alternate Concentration Limit (ACL) demonstration or Development of Protective Concentration Limits (PCLs);

   h. Regulated Unit Facility Assessment, Corrective Action (CA) work plans or reports for Regulated Units; and/or

   i. RCRA Facility Investigation (RFI)/Affected Property Assessment (APA), Remedy Selection, Corrective Measure Implementation (CMI)/Remedial Action Plan for solid waste management units, and/or areas of concern;

   j. Facility Operations Area (FOA).

5. A unit analysis fee of $500 per unit is assessed if any of the following occur:

   a. if a unit is added (even if identical to units already in place, using the criteria discussed in A.3 above);

   b. if there are design changes in an existing unit; or

   c. if a unit status changes from closure to post-closure care;

   d. Changes in the number, location, depth, or design of wells approved in compliance plan or a permit (unless it is a replacement well);

   e. Changes in point of compliance and compliance monitoring program;

   f. Changes in Groundwater Protection Standards, indicator parameters, Alternate Concentration Limits or Protective Concentration Limits; and/or

   g. Changes in corrective action program.

C. The application fee for a minor amendment, a Class 1, or a Class 1^1 modification of a

hazardous waste permit is $100 plus the notice fee of $50.

XIII. Confidential Material

Any information submitted in this application which is deemed confidential shall be provided in this Section as a separate collective document and clearly labeled **CONFIDENTIAL**. Refer to Part B instructions (page 9) for further information.

Clean Copy Text Revisions

Texas Commission on Environmental Quality
Permit Application for Industrial and Hazardous Waste Storage/Processing/Disposal Facility with Compliance Plan

Part B Application

The TCEQ is committed to accessibility. You may request an accessible version of these documents, by contacting the Industrial and Hazardous Waste permits section program at (512)-239-2335 or by email at ihwper@tceq.texas.gov.

Disclaimer:

This document is intended for use in the RCRA Part B application preparation and review process. Please use the knowledge about the facility's operational design and history to ensure that a complete application based on 40 Code of Federal Regulations Part 270 and 30 Texas Administrative Code (TAC) Chapter 305 and Chapter 335 is submitted. If regulatory requirements change during the application process, the TCEQ may request additional information before a permit is issued.

Texas Commission on Environmental Quality
Permit Application for Industrial and Hazardous Waste Storage/Processing/Disposal Facility with Compliance Plan

Part B Application

Form Availability:

This form, along with other Industrial and Hazardous Waste documents, is available online at: https://www.tceq.texas.gov/permitting/waste_permits/ihw_permits/ihw_permit_forms.html. The number for this form is 00376. Questions may be e-mailed to ihwper@tceq.texas.gov.

Introduction:

This permit application is generally a reorganized summary of the Part B information requirements of 40 CFR Part 270 and 30 Texas Administrative Code (TAC) Chapter 305 Subchapters C and D and Chapter 335. The TCEQ may request additional information before a permit is issued, if regulatory requirements change.

The original application plus copies for New, Renewals, Major Amendments and Class 3 Modifications should be submitted to:

Texas Commission on Environmental Quality
Attention: Waste Permits Division, MC 126
P.O. Box 13087
Austin, Texas 78711-3087

The original application plus copies for Class 1, Class 1[1], Class 2 Modifications and Minor Amendments should be submitted to:

Texas Commission on Environmental Quality
Attention: Industrial and Hazardous Waste Permits Section, MC 130
Waste Permits Division
P.O. Box 13087
Austin, Texas 78711-3087

Telephone Inquiries:

(512) 239 -2335 (For RCRA permit application) - Industrial & Hazardous Waste Permits Section, Waste Permits Division

(512) 239-6412 (For industrial and hazardous waste classification) - Technical Analysis Team, Industrial & Hazardous Waste Permits Section, Waste Permits Division

(512) 239-6413 (For solid waste registration number, EPA identification number, and notice of registration) - Registration and Reporting Section, Occupational Licensing and Registration Division

(512) 239-0272 (For non-combustion units) - Chemical New Source Review Permits

Section, Air Permits Division

(512) 239-1583 (For combustion units) - Energy/Combustion New Sources Review Permits Section, Air Permits Division

(512) 239-0600 (For legal) - Environmental Law Division

(512) 239-6150 (For financial assurance) - Financial Assurance Unit, Revenue Operations Section, Financial Administration Division

(512) 239-0300 (For payment of permit application fees) - Cashier's Office, Revenue Operations Section, Financial Administration Division

(512) 239-2201 (For compliance plan or corrective action) - Voluntary Cleanup Program/Corrective Action Section, Remediation Division

Application Review Prohibition:

The Texas Commission on Environmental Quality (TCEQ) shall not review an application for a new commercial hazardous waste facility, and the application shall be deemed not to have been received, until the emergency response information required by Section III.F. of the application has been reviewed and declared by TCEQ staff to be complete and satisfactory. [30 TAC 281.26, 30 TAC 305.50(a)(12)(C) and (D)]

Permit Issuance Prohibited [30 TAC 335.205]:

The TCEQ shall not issue a permit for:

1. a new hazardous waste management facility or an areal expansion of an existing facility if the facility or expansion does not meet the requirements of 30 TAC 335.204 (relating to Unsuitable Site Characteristics);
2. a new hazardous waste landfill or the areal expansion of an existing hazardous waste landfill if there is a practical, economic, and feasible alternative to such a landfill that is reasonably available to manage the types and classes of hazardous waste which might be disposed of at the landfill;
3. a new commercial hazardous waste management facility as defined in 30 TAC 335.202 (relating to Definitions) or the subsequent areal expansion of such a facility or unit of that facility if the owner/operator proposes to locate the boundary of the unit within 0.5 of a mile (2,640 feet) of an established residence, church, school, day care center, surface water body used for a public drinking water supply, or dedicated public park;
4. a new commercial hazardous waste management facility that is proposed to be located at a distance greater than 0.5 mile (2,640 feet) from an established residence, church, school, day care center, surface water body used for a public drinking water supply, or dedicated public park unless the applicant demonstrates to the satisfaction of the commission that the facility will be operated so as to safeguard public health and welfare and protect physical property and the environment, at any distance beyond the facility's property boundaries;
5. a proposed hazardous waste management facility, or a capacity expansion of an existing hazardous waste management facility if a fault exists within 3,000 feet of the proposed hazardous waste management facility or of the capacity expansion of an existing hazardous waste management facility unless the applicant performs the demonstration found in 30 TAC 305.50(a)(4)(D) and 305.50(a)(10)(E) ; and

6. A proposed solid waste facility for the processing or disposal of municipal hazardous waste or industrial solid waste which is located within an area of a municipality or county in which the processing or disposal of municipal hazardous waste or industrial solid waste is prohibited by an ordinance or order. [Texas Health and Safety Code Section 363.112]

See 30 TAC 335 Subchapter G: Location Standards for Hazardous Waste Storage, Processing, or Disposal for additional details and information regarding items 1 through 5 above.

Completing The Application and Electronic Checklist:

Prior to submitting a new permit application, please contact the TCEQ Registration and Reporting Section to obtain a Solid Waste Registration Number and an EPA Identification Number for inclusion in Section I.A. of this application. The facility's Solid Waste Registration Number may be proposed in Section I.A. as the Permit Number

This permit application form has been designed to solicit specific information, with reports to be attached or inserted. A response must be made for each informational request in the application form. If an item is not applicable please state "not applicable" and explain. All information included in the application must be listed by the format of the application. For example, if an engineering report is attached to the application to fulfill the requirements of Section V, then each subsection of the engineering report must correlate with the corresponding subsection in the application form (e.g., Subsection V.A.3. of the report would be proposed construction schedules). If information is provided which does not correspond with the application form, the specific rule or regulation which requires submittal of the information must be cited. Each report should be attached behind the summary form or table for the report and submitted as one document with the pages sequentially numbered at the bottom. Maps, bluelines, and drawings that cannot be folded to 8-1/2" x 11" may be submitted as separate documents. Engineering plans and specifications submitted with an application must be approved and sealed by a licensed Professional Engineer, with current license and designating the Registered Engineering Firm's name and Registration Number as required by the Texas Engineering Practice Act. Geology reports, geologic maps, and geologic cross-sections submitted with an application must be approved and sealed by a licensed Professional Geologist, with current license required by the Texas Geoscience Practice Act. Complete the tables in this application rather than substituting.

Facilities which will receive industrial and hazardous wastes from off-site sources must also provide information on these wastes and associated waste management units in accordance with 30 TAC 335.2.

In addition, the electronic checklist has been designed to facilitate the application preparation and review process, and should be completed and submitted along with applicable applications (see “Submittal” below).

For those who pre-filed a Part A application, certain items may have been omitted. These omissions must be addressed at this time. Additionally, if hazardous waste management methods have changed since the filing of the Part A, please provide an updated Part A.

Pursuant to Section 361.067 of the Texas Health and Safety Code, the TCEQ is required to mail a copy of this application or a summary of its contents to other regulatory agencies. Section I may be considered a summary of the entire application provided that all questions are completely answered. Therefore, Section I responses must not rely solely on cross-references to other sections of the application.

Groundwater Contamination:

If groundwater monitoring has detected the presence of hazardous constituents in the facility groundwater, the owner or operator must submit a Compliance Plan Application that is included as Section XI of this application. For more detailed instructions concerning a Compliance Plan, please see Section XI.

Submittal:

The complete application should be prepared using PDF and word processing. The third copy in the submittal package should consist of paper copies or PDF files of all surveys, reports, plot plans, diagrams, P&IDs, maps, etc., and a Compact Disk (CD) or USB drive of the completed application form document and tables included in this application attachments. Files may be compressed using PKZIP Ver. 2 or a 100% compatible program. For Renewal, Amendment, and Modification applications, the PDF files should include both a finalized version and, where available, a redline/strikeout version clearly identifying all proposed changes from the existing permit. For revised application sections and incorporated documents where redline/ strikeout versions are not available, submit a detailed listing of all proposed changes to the existing permit. In addition, the submitted electronic version of the application should be easily searchable during the review process by TCEQ staff. If your application is larger than 25 MB, you can submit your application via TCEQ's file transfer protocol server (FTPS) to ihwper@tceq.texas.gov. For instructions on using the agency's FTPS, please visit the **TCEQ FTPS website**.

Electronic Versions of the Application:

TCEQ will publish electronic copies of the application and associated documents online. Applicants must provide copy of the administratively complete application and technically complete application. The electronic copy provided would be the current, complete version with revisions and replacements made throughout the document and without redline/strikeout text. TCEQ will also publish electronic versions of NOD responses online.

For a new permit application or renewal, submit:

1. an original updated Part A permit application plus three (3) full copies;
2. the original Part B application plus three (3) full copies (including the electronic third copy);
3. a proof of payment receipt from **TCEQ ePAY,** or check for payment of permit application fees transmitted directly to the TCEQ Financial Administration Division;
4. pre-printed mailing labels of the adjacent landowners or an electronic mailing list on USB drive or Compact Disk (CD) in MS Word format; and
5. Completed RCRA Part B Administrative and Technical Evaluation Electronic Checklist (Form #00136) on CD, DVD, or USB drive.

For a new compliance plan or renewal of an existing compliance plan, please submit the following in addition to the above:

1. Sections I and XI.A. through XI.E., as applicable;
2. Tables XI.A.I., XI.E.1 through XI.E.III, and CP Tables I, II, V, VI through IX, are required; and CP Tables IIIA, IIIA, IV and IVA as applicable. (The applicant should use the MS Word formatted Tables provided in the Part B application to include site-specific information that will become part of the final draft permit. Table should be converted to PDF format before submitting your application); and

1. a Sampling and Analysis Plan (SAP) compliant with "Attachment A" requirements and evaluation of monitoring wells compliant with "Attachment B" well specification requirements.

For a post-closure care permit submit:

4. an original updated Part A permit application plus three (3) full copies;
5. the original Part B application (excluding Sections III B and F; IV A, C and D; VII A and B; VIII.B and C; and X) plus three (3) full copies;
6. a proof of payment receipt from TCEQ ePAY, or a check for payment of permit application fees transmitted directly to the TCEQ Financial Administration Division;
7. pre-printed mailing labels of the adjacent landowners or an electronic mailing list on USB drive or Compact Disk (CD) in MS Word format; and
8. Completed RCRA Part B Administrative and Technical Evaluation Electronic Checklist (Form #00136) on CD, DVD, or USB drive.

For major amendments to an issued hazardous waste permit, submit:

1. (if appropriate) an original updated Part A permit application plus three (3) full copies;
2. an original Part B application plus three (3) full copies, consisting of, at a minimum, Section I - Table I of the Part B plus replacement pages for the changed portions of the application that change as a result of the amendment;
3. an explanation of why the major amendment is needed;
4. a proof of payment receipt from TCEQ ePAY, or a check for payment of permit application fees transmitted directly to the TCEQ Financial Administration Division;
5. pre-printed mailing labels of the adjacent landowners or an electronic mailing list on USB drive or Compact Disk (CD) in MS Word format; and
6. Completed RCRA Part B Administrative and Technical Evaluation Electronic Checklist (Form #00136) on CD, DVD, or USB drive.

For minor amendments to an issued hazardous waste permit, submit:

1. (if appropriate) an original updated Part A permit application plus three (3) full copies;
2. an original Part B application plus three (3) full copies, consisting of, at a minimum, Section I-Table I of the Part B plus replacement pages for the changed portions of the application that change as a result of the amendment;
3. an explanation of why the minor amendment is needed;
4. a proof of payment receipt from TCEQ ePAY, or a check for payment of permit application fees transmitted directly to the TCEQ Financial Administration Division;
5. pre-printed mailing labels of the adjacent landowners or an electronic mailing list on USB drive or Compact Disk (CD) in MS Word format

For Class 3 modifications (including adding or revising a Compliance Plan) to an issued hazardous waste permit, submit:

1. (if appropriate) an original updated Part A permit application plus three (3) full copies;
2. an original Part B application plus three (3) full copies, consisting of, at a minimum, Section I - Table I of the Part B plus replacement pages for the changed portions of the application that change as a result of the modification;
3. a description of the exact changes to be made to the permit conditions and supporting documents referenced by the permit;
4. an explanation of why the Class 3 modification is needed;
5. evidence of the public notice mailing and publication (after the public meeting, please submit a statement that the public meeting was held within the required timeframes);

   a. Evidence of public notice mailing to Adjacent Landowners requires submittal of copies of mail.
6. a proof of payment receipt from TCEQ ePAY, or a check for payment of permit application fees transmitted directly to the TCEQ Financial Administration Division;
7. pre-printed mailing labels of the adjacent landowners or an electronic mailing list on USB drive or Compact Disk (CD) in MS Word format; and
8. Completed RCRA Part B Administrative and Technical Evaluation Electronic Checklist (Form #00136) on CD, DVD, or USB drive.

For Class 2 modifications to an issued hazardous waste permit, submit:

1. an original Class 2 Modification Form (TCEQ-20903) plus an electronic copy along with the required documents listed in the form;

For Class 1[1] modifications to an issued hazardous waste permit, submit:

1. an original Class 1ED Modification Form (TCEQ-20903) plus an electronic copy along with the required documents listed in the form;

For Class 1 modifications to an issued hazardous waste permit, submit:

1. an original Class 1 Modification Form (TCEQ-20903) plus an electronic copy along with the required documents listed in the form;

If several modifications are submitted as one application, the application review will proceed at rate of the amendment or modification which has the longest timeframe.

Application Revisions:

Please submit any application revisions with a revised date and page numbers at the bottom of the page(s).

Waivers:

Any request for waiver of any of the applicable requirements of this permit application must be fully documented.

Designation of Material as Confidential:

The designation of material as confidential is frequently carried to excess. The Commission has a responsibility to provide a copy of each application to other review agencies and to interested persons upon request and to safeguard confidential material from becoming public knowledge. Thus, the Commission requests that the applicant (1) be prudent in the designation of material as confidential and (2) submit such material only when it might be essential to the staff in their development of a recommendation.

The Commission suggests that the applicant not submit confidential information as part of the permit application. However, if this cannot be avoided, the confidential information should be described in non-confidential terms throughout the application, cross-referenced to Section XIII: Confidential Material, and submitted as a separate Section XIII document or binder, and conspicuously marked "CONFIDENTIAL."

Reasons of confidentiality include the concept of trade secrecy and other related legal concepts which give a business the right to preserve confidentiality of business information to obtain or retain advantages from its right in the information. This includes authorizations under, 18 U.S.C. 1905 and special rules cited in 40 CFR Chapter I, Part 2, Subpart B. Section 361.037 of the Texas Health and Safety Code does not allow an applicant for an industrial solid waste permit to claim as confidential any record pertaining to the characteristics of the industrial solid waste.

The applicant may elect to withdraw any confidential material submitted with the application. However, the permit cannot be issued, amended, or modified if the application is incomplete.

Exposure Assessment:

In accordance with 30 TAC 305.50(a)(8) and 40 CFR 270.10(j), any Part B application submitted for a facility that stores, processes, or disposes of hazardous waste in a surface impoundment or a landfill (including post-closure) must be accompanied by exposure information of the potential for the public to be exposed to hazardous wastes or hazardous constituents through releases related to the unit. This exposure information is considered separate from the permit application, as stated in 40 CFR 270.10(c).

Pre-Application Meeting/Public Participation Activities [30 TAC 335.391 and 30 TAC 39.503]:

a. Applicant-held pre-application public meeting

In accordance with 30 TAC 335.503(b) and 40 CFR Part 124.31(b)-(d), an applicant-held pre-application public meeting is required for the following application types prior to submitting the application to allow the applicant and the public to identify potential issues:

- New applications;
- Renewal applications with Class 3 Permit Modifications or Major Amendments; and
- Major Amendment applications.

The pre-application public meeting is not required for an application submitted for the sole purpose of conducting post-closure activities or post-closure activities and corrective action at a facility unless:

- The application is also for an initial permit for hazardous waste management unit(s); or
- The application is also for renewal of the permit, where the renewal application is proposing a significant change (Class 3 Permit Modification or Major Amendment) in facility operations (Note: per preamble to the related federal rule, the facility operations referenced herein exclude post-closure and corrective action activities).

b. Pre-application meeting with TCEQ

Applicants are strongly encouraged to request a pre-application meeting with TCEQ Permits Section staff and to notify the Industrial and Hazardous Waste Permits Section, Waste Permits Division of intent to file new, renewal, Class 3 permit modification, major amendment, and other complex permit applications.

c. Pre-application local review

In accordance with 30 TAC 335.391, for a new hazardous waste management facility, if a local review committee has been established to facilitate communication between the applicant and the local host community, the applicant should summarize the activities of the committee and submit this summary with the application. Any report completed by a review committee must be submitted.

New industrial or hazardous waste facility that would accept municipal solid waste:

a. If an applicant proposes a new industrial or hazardous waste facility that would accept municipal solid waste, the applicant shall hold a public meeting in the county in which the facility is proposed to be located. This meeting must be held before the 45th day after the date the application is filed. In addition, the applicant shall publish notice of the public meeting in accordance with 30 TAC 39.503(e)(5).

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.

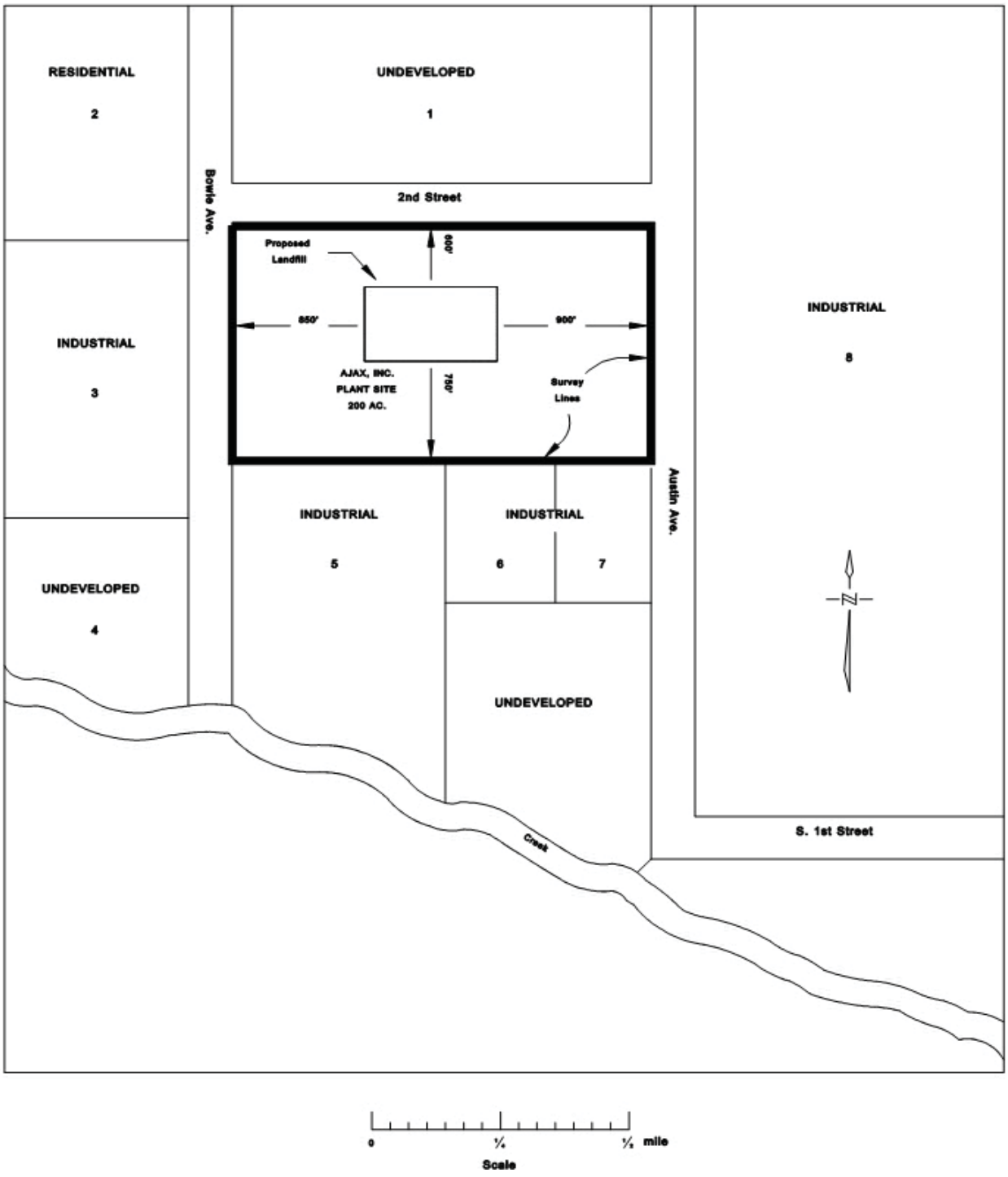
If it is determined that a bilingual notice is required, the applicant is responsible for ensuring that the publication in the alternate language is complete and accurate in that language. Electronic versions of the Spanish template examples are available from the TCEQ to help the applicant complete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

Complete and submit the Bilingual notice confirmation for this application. The Bilingual notice confirmation can be downloaded from the Navigation Pane.

Landowners Cross-Referenced To Application Map

SAMPLE APPLICATION MAP

ALL ADJACENT LANDOWNERS SHALL BE IDENTIFIED



The persons identified below would be considered as affected persons.

1. MR & MRS SAMUEL L TEXANS
11901 STARTLE BLVD
ATOWN TX 78759

2. MR & MRS EDWARD CITIZENS
1405 LINEAR ROAD
LITTLE TOWN TX 76710

3. TEXAS LINKED CORP
8411 NNW HWY
BIG PLACE TX 77590

4. MR & MRS TED GOLDEN MUSTARD
3210 AVENUE BLVD
FISHINSPOT TX 76724

5. GENERIC BREWING CO
4240 KNIGHTS BRIDGE
OUTBACK TX 77640

6. PLAIN COMPANY
6647 CRAIGMOUT LANE
BIG PLACE TX 77590

7. ABC CHEMICALS INC
1212 ZIP STREET
BROADBANKS TX 77640

8. BIG LOCAL BOTTLE CO
10024 LOCAL BLVD
URSINUS TX 79402

Adjacent Landowners List

Submit a map indicating the boundaries of all adjacent parcels of land, and a list (see samples in the instructions) of the names and mailing addresses of all adjacent landowners and other nearby landowners who might consider themselves affected by the activities described by this application. Cross-reference this list to the map through the use of appropriate keying techniques. The map should be a USGS map, a city or county plat, or another map, sketch, or drawing with a scale adequate enough to show the cross-referenced affected landowners. The list should be updated prior to any required public notice. It is the applicant's responsibility to ensure that the list is up-to-date for any required public notice. For all applications (with the exception of Class 1 and Class 1^1 modifications) this mailing list should be submitted on:

1. a Compact Disk (CD) or a USB Drive using software compatible with MS Word [30 TAC 39.5(b)]; or

2. four sets of printed labels.

If the adjacent landowners list is submitted on a compact disk (CD), please label the disk with the applicant's name and permit number. Within the file stored on the disk, type the permit number and applicant's name on the top line before typing the addresses. Names and addresses must be typed in the format indicated below. This is the format required by the U.S. Postal Service for machine readability. Each letter in the name and address must be capitalized, contain no punctuation, and the appropriate two-character abbreviation must be used for the state. Each entity listed must be blocked and spaced consecutively as shown below. The list is to be 30 names, addresses, etc. (10 per column) per page (MS WORD Avery Standard 5160 - ADDRESS template).

Example:

HEAVY METALS LP
PO BOX 85624
PUMPKIN PARK TX 79998-5624

MR AND MRS W R NEIGHBOURLY
1405 ACROSSTHE WAY
GREATER METRO CITY TX 79199

A list submitted on compact disk (CD) should be the only item on that disk. Please do not submit a list on a disk that includes maps or other materials submitted with your application.

If you wish to provide the list on printed labels, please use sheets of labels that have 30 labels to a page (10 labels per column) (for example: Avery® Easy Peel® White Address Labels for Laser Printers 5160). Please provide four complete sets of labels of the adjacent landowners list.

Plain Language Summary and Public Involvement Plan (PIP)

Complete the following form(s) as applicable, 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].

Plain Language Summary Form - English

Plain Language Summary Form - Instructions

Plain Language Summary Form - Spanish

Public Involvement Plan (Form TCEQ-20960)

Instructions for PIP TCEQ-20960

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Open the File Attachments List in the Navigation Page to view all tables and attachments. (Or, click here to open List of Attachments Navigation Pane). Word versions of the Compliance Plan tables are included in the Attachment Tab, not PDF versions. Links below will only open the PDF versions of the tables. Select the applicable tables for your application and complete.

TCEQ Core Data Form (TCEQ-10400) [External weblink to download form]
Signature Page for Application
Table I - General Information
Table I.1 - Description of Proposed Application Changes
Adjacent Landowners List and Map (Go to instructions on page 11)
Table II - Facility Siting Criteria Information
Table III.D - Inspection Schedule
Table III.E.1 - Arrangement with Local Authorities
Table III.E.2 - Emergency Coordinators
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Table IV.A - Waste Management Information
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Table V.H.5. - Incinerator Permit Conditions, Monitoring and Automatic Feed Cutoff Systems - Short-Term Operation
Table V.H.8. - Principal Organic Hazardous Constituents
Table V.I.1. - Boilers/Industrial Furnaces
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Table V.I.4. - Maximum Allowable Emission Rates
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Table XII.B. - Hazardous Waste Permit Application Fee Worksheet

Compliance Plan Tables - (All CP Tables are in MS Word format. Convert the tables to PDF format when submitting the application)

CP Table I - Waste Management Units and Areas Subject to Groundwater Corrective Action and Compliance Monitoring
CP Table II - Solid Waste Management Units and/or Areas of Concern for which Corrective Action applies pursuant to 30 TAC 335.167
CP Table III - Corrective Action Program Table of Detected Hazardous and Solid Waste Constituents and the Groundwater Protection Standard
CP Table IIIA - Corrective Action Program Table of Indicator Parameters and Groundwater Protection Standard
CP Table IV - Compliance Monitoring Program Table of Hazardous and Solid Waste Constituents and Quantitation Limits
CP Table IVA - Compliance Monitoring Program Table of Detected Hazardous Constituents and the Groundwater Protection Standard
CP Table V - Designation of Wells
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Appendices List - NOTE: Provide all Part B responsive information, (e.g. engineering reports, attachments, drawings, tables, maps, etc.) in an Appendix for each section of the application. When preparing the physical format review the Format of Hazardous Waste permit Application and Instructions.
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Appendix III - Facility Management
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Appendix III.B. - Personnel Training Plan
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Appendix VII.A. - Closure Plan
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Appendix VII.C. - Post-Closure Plan
Appendix VII.D. - Post-Closure Cost Estimate
Appendix VII.E. - Closure and Post-Closure Cost Summary Tables
Appendix VIII - Financial Assurance Infomation
Appendix IX - Releases from Solid Waste Units and Corrective Action

Appendix X - Air Emission Standards
Appendix XI- Compliance Plan
Appendix XII - Hazardous Waste Permit Application Fee Tables
Appendix XIII - Confidential Information

Texas Commission on Environmental Quality
Industrial & Hazardous Waste Part B Permit Application

I. General Information

Provide all Part B responsive information in Appendix I. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

Provide responsive information in Appendix I.

a. Complete Table I - General Information **See Appendix I**

b. For all incoming New, Renewal, Class 3 Permit Modification, and Major Amendment applications, the TCEQ requires that a Core Data Form (CDF) be submitted whether or not a change has occurred in the previously submitted form.
For Minor Amendment, Class 1, Class 1[1] , and Class 2 Permit Modification applications, the TCEQ requires that the CDF be only submitted if a change in any information in the previously submitted form has occurred at the time of the application submittal.
For more information regarding the Core Data Form, call (512) 239 1575 or go to the TCEQ Web site at https://www.tceq.texas.gov/permitting/central_registry/guidance.html

See Appendix I

c. **Signature on Application**
It is the duty of the operator to submit an application for a permit. The person who signs the application form will often be the operator himself; when another person signs on behalf of the applicant, his title or relationship to the applicant will be shown. In all cases, the person signing the form must be authorized to do so by the applicant. An application submitted by a corporation must be signed by a responsible corporate officer such as a president, secretary, treasurer, vice president, or by his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the activity described in the form originates. In the case of a partnership or a sole proprietorship, the application must be signed by a general partner or the proprietor, respectively. In the case of a municipal, state, federal, or other public facility, the application must be signed by a principal executive officer, a ranking elected official, or another duly authorized employee. A person signing an application on behalf of an applicant must provide notarized proof of authorization.

d. Complete Interim Status Land Disposal Unit(s) Certification, as applicable **Not Applicable**

e. Submit List and Map of Adjacent Landowners List, as applicable. **See Appendix I**

II. Facility Siting Criteria

Provide all Part B responsive information in Appendix II. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

For all new hazardous waste management facilities or areal expansions of existing hazardous waste management facilities provide a report which includes all applicable information regarding Unsuitable Site Characteristics found in 30 TAC Chapter 335, Subchapter G. The report must address each requirement applicable to the type of activity submitted in the application. Reference specific rule numbers whenever possible. Supporting information may be cross-referenced to other parts of this application such as Section V - Engineering Report or Section VI - Geology Report, but information submitted in previous applications must be fully reproduced herein. In addition, provide the information in Table II, as applicable.

For permit renewals provide a report which includes all applicable information regarding Unsuitable Site Characteristics found in 30 TAC Chapter 335, Subchapter G. In addition, provide the information in Table II, as applicable. The applicant may resubmit the information submitted with the original permit application provided this information has not changed. For a renewal this information is necessary to ensure a complete application is received.

The Site Selection Report and Table II are included in Appendix II.

For capacity expansions of existing facilities, please provide information in Table II, as applicable. Please note however, that additional technical information may be requested to address any facility siting characteristics noted in Table I, under Facility Siting Summary.

Not applicable

> **NOTE:** 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)]

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

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

   Table II.A is included in Appendix II.

B. Additional Requirements for Land Treatment Facilities [30 TAC 335.204(b)]

   Complete Table II.B.-Additional Requirements for Land Treatment Facilities [30 TAC 335.204(b) Not Applicable

C. Additional Requirements for Waste Piles [30 TAC 335.204(c)]

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

   Not Applicable

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

   Complete Table II.D.- Additional Requirements for Storage Surface Impoundments [30 TAC 335.204(d)] Not Applicable

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

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

Table II.E is included in Appendix II.

F. Flooding

1. Identify whether the facility is located within a 100-year flood plain [40 CFR 270.14(b)(11)(iii)]. This identification must indicate the source of data for such determination and include a copy of relevant documentation (e.g., flood maps, if used and/or calculations). The boundaries of the hazardous waste management facility must be shown on the flood plain map. If the facility is not subject to inundation as a result of a 100-year flood event, indicate that the facility is not within the 100-year flood plain, and do not complete the remainder of the Flooding section in Table II. An applicant for a proposed hazardous waste landfill, areal expansion of a hazardous waste landfill, or a commercial hazardous waste land disposal unit may not rely solely on flood plain maps prepared by the Federal Emergency Management Agency (FEMA) or a successor agency for this determination.

Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map - Map Number 48201C0905N (with a map revision date of May 2, 2019) indicates that while parts of the facility are within the 100-year floodplain, the permitted units are outside of the Special Flood Hazard Areas, including the 100-year floodplain. The FEMA map is included in the Site Selection Report in Appendix II.

2. If the facility is located within the 100-year flood plain the applicant must provide information detailing the specific flooding levels and other events (e.g., Design Hurricane projected by Corps of Engineers) which impact the flood protection of the facility. Information shall also be provided identifying the 100-year flood level and any other special flooding factors (e.g., wave action) which must be considered in designing, construction, operating, or maintaining the facility to withstand washout from a 100-year flood. **Not Applicable**

3. State whether any flood protection devices exist at the facility (e.g., flood walls, dikes, etc.), designed to prevent washout from the 100-year flood.

Not Applicable

a. 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)]

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)]

Not Applicable

b. 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)]

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)]

Not Applicable

4. If applicable, and in lieu of the flood protection devices from above, provide a detailed description of the procedures to be followed to remove hazardous waste to safety before the facility is flooded. [40 CFR 270.14(b)(11)(iv)(c)] The procedures should include: Not Applicable

   a. Timing of such movement relative of flood levels, including estimated time to move the waste, to show that such movement can be completed before flood waters reach the facility. Indicate which specific events shall be use to begin waste movement (e.g., Hurricane warning, Flash Flood watch, etc.);

   b. A description of the location(s) to which the waste will be moved and a demonstration that these facilities will be eligible to receive hazardous waste in accordance with appropriate regulations (i.e., a permitted facility);

   c. The planned procedures, equipment, and personnel to be used and the means to ensure that such resources will be available in time for use; and

   d. The potential for accidental discharges of the waste during movement and precautions taken to preclude accidental discharges.

G. Additional Information Requirements

1. For a new hazardous waste management facility, include a map of relevant local land-use plans and descriptions of the major routes of travel in the vicinity of the facility to be used for the transportation of hazardous waste to and from the facility covering at least a five (5)-mile radius from the boundaries of the facility. [30 TAC 305.50(a)(10)(A)&(D)] **Not applicable; this application is not for a new hazardous waste management facility.**

2. For a new commercial hazardous waste management facility as defined in 30 TAC 335.202 or the subsequent areal expansion of such a facility or unit of that facility, indicate on the map the nearest established residence, church, school, day care center, surface water body used for a public drinking water supply, and dedicated public park. **Not applicable; this application is not for a new commercial hazardous waste management facility.**

3. For new commercial hazardous waste management facilities, submit the following: [30 TAC 305.50(a)(12)(A)] **Not applicable; this application is not for a new commercial hazardous waste management facility.**

   a. the average number, gross weight, type, and size of vehicles used to transport hazardous waste;

   b. the major highways nearest the facility irrespective of distance; and

   c. the public roadways used by vehicles traveling to and from the facility within a minimum radius of 2.5 miles from the facility.

4. Include the names and locations of industrial and other waste-generating facilities within 0.5 miles for a new on-site hazardous waste management facility and the approximate quantity of hazardous waste generated or received

annually at those facilities. [30 TAC 305.50(a)(10)(B)&(C)] **Not applicable; this application is not for a new on-site hazardous waste management facility.**

5. Include the names and locations of industrial and other waste-generating facilities within 1.0 miles for a new commercial hazardous waste management facility and the approximate quantity of hazardous waste generated or received annually at those facilities. [30 TAC 305.50(a)(10)(B)&(C)] **Not applicable; this application is not for a new commercial hazardous waste management facility.**

6. For existing land disposal facility units provide documentation that the information required by 30 TAC 335.5 has been placed in the county deed records. If previously submitted, please reference the submittal by date and registration number. **Copies of the deed recordations for the Moat (NOR 001), the Stormwater Pond (NOR 002), and the Bauxite Pond (NOR 007) are included in Appendix II.G.6.**

7. If a surface impoundment or landfill (including post-closure) is to be permitted, provide exposure information to accompany this application and in accordance with 30 TAC 305.50(a)(8) and 40 CFR 270.10(j). This information will be considered separately from the TCEQ application completeness determination.

   Appendix II.G.7 includes the Exposure Information Report for the active in lieu of closure Stormwater Pond.

   Information for the Closed Moat and Closed Bauxite Pond:

   305.50(a)(8): (A) reasonably foreseeable potential releases from both normal operations and accidents at the unit, including releases associated with transportation to or from the unit: No potential releases foreseeable. Units are closed and capped. In addition, no waste is transported to or from the units.

   (B) the potential pathways of human exposure to hazardous wastes or constituents resulting from documented releases: Potential pathways for human exposure are through potential migration of constituents into the surrounding media. Groundwater is monitored in accordance with the Compliance Plan. There has been no evidence of releases to date.

   (C) the potential magnitude and nature of the human exposure resulting from such releases: There is no potential for human exposure from the closed units.

8. For a hazardous waste management facility requesting a capacity expansion of an existing hazardous waste management facility, please provide in Section VI.A.1.a the requested fault delineation information. [30 TAC 305.50(a)(4)(D)]

   Not Applicable; no expansion is being requested.

III. Facility Management

Provide all Part B responsive information in Appendix III. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

A. Compliance History and Applicant Experience

1. Provide listings of all solid waste management sites in Texas owned, operated, or controlled by the applicant as required by 30 TAC 305.50(a)(2).
The following solid waste management sites in Texas are owned, operated, or controlled by PRSI:

Owner: Pasadena Refining System, Inc.
RN Number: RN100716661
CN Number: CN602779951
Name: Pasadena Refining System, Inc.
Primary Business: Industrial Oil Refining
Address: 111 Red Bluff Road, Pasadena, TX 77506-1530
ISW Reg. No.: 30311

Owner: PRSI Real Property Holdings LLC. (a wholly owned subsidiary of Pasadena Refining System, Inc.)
RN Number: RN100716661
CN Number: CN602779951
Name: Pasadena Paper Company
Primary Business: Production of Coated Paper Products
Address: 901 Shaver Street, Pasadena, TX 77506-4456
ISW Reg. No.: 30582 (inactive) and 86155 (inactive)

2. For a new commercial hazardous waste management facility, provide a summary of the applicant's experience in hazardous waste management as required by 30 TAC 305.50(a)(12)(F). **Not applicable – this is not a new commercial hazardous waste management facility.**

B. Personnel Training Plan

Provide an outline of the facility training plan which includes all the information required by 40 CFR 264.16. Indicate which training will be repeated annually.

Not applicable. There are no operational hazardous waste units addressed by this permit.

C. Security

Describe how the facility complies with the security requirements of 40 CFR 264.14 or submit a justification demonstrating the reasons for requesting a waiver of these requirements.

There are no operational hazardous waste units addressed by this permit. A copy of the Security Plan Summary covering the Moat, Stormwater Pond, Bauxite Pond, and Corrective Action areas is included in Appendix III.C.

D. Inspection Schedule

Describe summary of inspection schedule and Table III.D in Appendix III.D in accordance with instructions below.

Provide an inspection schedule summary for the facility which reflects the requirements of 40 CFR 264.15(b), 264.33 and, where applicable, the specific requirements in 40 CFR 264.174, 264.193(i), 264.195, 264.226, 264.254, 264.273, 264.303, 264.347, 264.552, 264.574, 264.602, 264.1033(f), 264.1034, 264.1052,

264.1053(e), 264.1057, 264.1058, 264.1063, 264.1084, 264.1085, 264.1086, 264.1088, 264.1101(c)(4) and 270.14(b)(5). The inspection schedule should reflect the requirements described below. The schedule should encompass each type of hazardous waste management (HWM) unit (i.e., facility component) and its inspection requirements. For incorporation into a permit, complete Table III.D. - Inspection Schedule for all units to be permitted.

The owner or operator must inspect the facility for malfunctions and deterioration, operator errors, and discharges which may be causing or may lead to the release of hazardous waste constituents to the environment or which may pose a threat to human health. The owner or operator must conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.

The owner or operator must develop and follow a written schedule for inspecting other basic elements such as monitoring equipment, safety and emergency equipment, security devices, the presence of liquids in leak detection systems, where installed, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards.

If the owner or operator of a facility which contains a waste pile wishes to pursue an exemption from the groundwater monitoring requirements for that waste management unit, the inspection schedule must include examination of the base for cracking, deterioration, or other conditions that may result in leaks. The frequency of inspection must be based on the potential for the liner (base) to crack or otherwise deteriorate under the conditions of operation (e.g., waste type, rainfall, loading rates, and subsurface stability).

Inspection schedules for the Moat, Stormwater Pond, and Bauxite Pond are provided in Table III.D and checklists are provided in Appendix III.D. PRSI will remedy any deterioration or malfunction of equipment or structures revealed during inspections on a schedule that prevents the problem from leading to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action will be taken immediately. The date and a description of remedial action taken in response to facility inspections will be included in the inspection records. Inspection records will be kept for at least three years from the date of inspection.

E. Contingency Plan (Not Applicable to Permits for Post-Closure Care Only)

If the owner or operator has already prepared a Spill Prevention, Control, and Countermeasures (SPCC) Plan or some other emergency or contingency plan, he need only amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this section. Provide a Contingency Plan which includes all the information required by 40 CFR Part 264 Subparts C and D, except for 40 CFR 264.56(d)(1) and 30 TAC 335.153(2). This plan must also include a drawing of the facility which shows the location of all emergency equipment. In addition, complete the following tables to summarize information expressed in more detail in the plan.

The most recent update to the Integrated Contingency Plan (ICP), which includes the Emergency Response Action Plan, the Spill Prevention, Control, and Countermeasures (SPCC) Plan, and Contingency Plan, was in May 2024. The full text of the ICP was included with the Class 2 Permit Modification submitted on May 30, 2024. As requested by TCEQ following submittal of the modification, this permit renewal application includes only the required tables listed below, excerpts from the ICP providing the information required by 40 CFR Part 264 Subparts C and D, except for 40 CFR 264.56(d)(1) and 30 TAC 335.153(2), and drawings of the facility showing the location of all emergency equipment. These items are included in Appendix III.E. A copy of the integrated contingency plan is maintained in the operating record and is made available to local authorities. A copy will be provided

to TCEQ upon request.

1. Arrangements with Local Authorities
   Complete Table III.E.1. - Arrangements With Local Authorities to indicate arrangements (if made) with local authorities to familiarize local fire and police departments, local hospitals, equipment suppliers, and local and State emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes. Provide documentation of the attempts and any arrangements made with local authorities and emergency response teams. Table III.E.1 is included in Appendix III.E.

2. Emergency Coordinator's List
   For inclusion into a permit, list in Table III.E.2. - Emergency Coordinators the persons qualified to act as emergency coordinator. List the alternates in the order in which they will assume responsibility.
   Table III.E.2 is included in Appendix III.E. Because the facility operates 24/7, there is always an Emergency Coordinator on-site, including during shutdowns, holidays, and hurricane evacuations. Therefore, PRSI respectfully requests that in order to protect the privacy of individuals, the facility be exempted from the requirement to list home addresses. All other information required by the table is included.

3. Emergency Equipment List
   For inclusion into a permit, list in Table III.E.3. - Emergency Equipment all types of emergency equipment at the facility [such as fire-extinguishing systems, spill-control equipment, communications and alarm systems (internal and external), and decontamination equipment], if this equipment is required. Briefly outline the equipment capabilities.
   Table III.E.3 is included in Appendix III.E.

4. Waiver from Preparedness and Prevention Requirements
   If the owner or operator wishes to request a waiver from any of the preparedness and prevention requirements, he must submit a justification demonstrating the reasons for requesting the waiver, as discussed below.
   Not applicable

F. Emergency Response Plan

For a new commercial hazardous waste management facility, the application shall contain evidence sufficient to demonstrate that emergency response capabilities are available or will be available before the facility first receives waste. An emergency response plan must be provided which satisfies the requirements of 30 TAC 305.50(a)(12)(C) and (D). This plan must show that the proposed facility has sufficient emergency response capabilities for managing a reasonable worst-case emergency condition associated with the operation of the facility. (For financial assurance requirements associated with the emergency response activities, please see Section VIII.C.3.) Not applicable

1. Practice Drills

   In addition to the contingency plan required under 40 Code of Federal Regulations Part 270.14(b)(7), provisions specifying procedures and timing of practice facility evacuation drills are required. Provide a description and a frequency for facility evacuation drills.

2. If a private corporation, municipality or county group will provide emergency response actions at the proposed facility, include a copy of the contract for this type of agreement with this application or state that documentation will be

submitted before the facility accepts wastes.

3. Historical weather data for the area should be documented and submitted. Information regarding how emergency response operations may be affected by weather conditions should be included. (Local rainfall extremes, average rainfall amounts, average wind speeds and directions, potential for major weather events such as hurricanes, tornados, icy conditions, flash flooding etc., should be addressed.)

4. A definition of a worst-case emergency for the proposed facility should be described in the application. This worst-case emergency should take into account the possible complications involved with a facility emergency compounded by adverse weather conditions. It should also detail spills, fires, explosions, etc. This worst case scenario should be developed with the help of local governmental entities where possible. Emergency planning should include both unexpected emergencies and emergencies occurring as a result of a predictable event such as a flood or hurricane. For areas which are prone to hurricanes and flash flooding, the worst case which allows for a realistic situation should be used. For example, response teams should be well versed in reacting to events such as a 100-year flood.

5. A training program for personnel who will respond to these types of emergencies must be provided and must include the requirements described in OSHA Federal Register 1910 and EPA Federal Register 311, the Texas Hazard Communication Act, SARA Title III 302, 304, 311, 312, and 313. If emergency response actions are contracted out, the contracted employees must be properly trained and documentation of this training must be maintained on-site. All responders to emergencies at the proposed facility must be involved in training and drills at the facility in order to be thoroughly familiar with the facility and its operations.

6. The application must include a description and identification of first-responders (i.e. all pertinent facility personnel, local responders, and contractors). The duties of the facility employee who is to be the on-scene coordinator (OSC) must be described. Additional information must be provided detailing the OSC's role in the emergency response activities. This person must have the authority to commit the resources needed to carry out the Emergency Response Plan. His duties must be thoroughly described so that it is clear whether he will remain in control once the emergency response team arrives or whether he will relinquish control to another incident commander upon that person's arrival on the scene. Additionally, there must be a qualified OSC on-site or on call 24 hours a day. The name, address and phone numbers (home and work) of the OSC(s) must be listed in the Emergency Response Plan. Where more than one person is listed, one must be named as the primary OSC and others must be listed in the order in which they will assume responsibility as alternates.

7. Local or regional emergency medical services or hospitals which have experience in hazardous materials training must be identified in the application. The names, addresses and phone numbers of the hospitals or medical centers should be listed here and updated as necessary. Additionally, maps showing the quickest routes to the medical services must be provided. A description of decontamination procedures for injured personnel prior to transport to medical services must also be provided. The decontamination and transport of injured people to appropriate medical centers must be included in the emergency evacuation training and drills.

8. A pre-disaster plan which includes training drills must be included in the application. This plan should include a schedule for staging evacuations of the facility and for emergency response training drills. At least two evacuations and

two emergency response drills should occur annually. The plan should also include additional drills for responding to "predictable" emergencies such as floods and hurricanes. The plan must include the following (or must reference applicable sections of the Contingency Plan): a description of arrangements already in place with local authorities; emergency phone numbers; internal communication or alarm systems and proper alarm codes; a list of all types of emergency equipment at the facility, including a physical description and the capabilities of each item on the list, and the location of each item (a map would be useful here); a description of decontamination equipment; an evacuation plan including signals, evacuation routes and alternate evacuation routes; listing of pertinent first responder emergency phone numbers, and codes for other types of communication devices; and a description of actions that will be performed in the event that a "predictable" emergency occurs.

9. Describe the mechanism which will be used to notify first responders and appropriate local governmental entities that an emergency has occurred. Also describe the mechanism which will be used to notify all applicable governmental agencies when an incident occurs (i.e., TCEQ, Texas Parks and Wildlife, General Land Office, TCEQ Office of Air Quality, Texas Department of Health, and the Texas Railroad Commission).

10. Evidence must be provided that shows coordination with the Local Emergency Planning Committee (LEPC) and any local comprehensive emergency management plan. The applicants should be able to show compliance with SARA Title III.

11. Any medical response capabilities proposed for the facility property must be detailed in the application.

IV. Wastes and Waste Analysis

Provide all Part B responsive information in Appendix IV. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

A. Waste Management Information

For a new hazardous waste management facility or for a facility hazardous waste management capacity expansion, complete Table IV.A. - Waste Management Information for each waste, source, and volume of waste to be stored, processed, or disposed of in the facility units to be permitted as required by 30 TAC 305.50(a)(9). For on-site facilities, list "on-site" for the waste source. For off-site facilities, list the source of the waste. If unknown, identify potential sources (e.g., industries/processes to be serviced).

Not applicable. This is not an application for a new hazardous waste management facility or for a capacity expansion.

B. Waste Managed In Permitted Units

For all hazardous waste management facilities and for inclusion into a permit, complete Table IV.B. - Wastes Managed In Permitted Units for each waste and debris to be managed in a permitted unit. Provide a description, EPA waste codes, and TCEQ waste form codes and classification codes. Guidelines for the Classification & Coding of Industrial Wastes and Hazardous Wastes, TCEQ publication RG-22, contains guidance for how to properly classify and code industrial waste and hazardous waste in accordance with 30 TAC 335.501-335.515 (Subchapter R).

Applicants need not specify the complete 8-digit waste code formulas for their wastes but must include the 3-digit form codes and 1-digit classification codes. This allows the applicant to specify major categories of wastes in an overall manner without having to list all the specific waste streams as generated.

Not applicable. No hazardous wastes are currently managed in any permitted unit including the Moat (NOR 001), Stormwater Pond (NOR 002), and Bauxite Pond (NOR 007) as indicated in the most recent Notice of Registration (NOR). However, Stormwater Pond waste is analyzed annually for benzene in accordance with the closure plan. Table IV.B is included in Appendix IV.

C. Sampling and Analytical Methods

For inclusion into a permit, complete Table IV.C. - Sampling and Analytical Methods for each waste and debris proposed to be sampled and analyzed and include sampling location, sampling method, sample frequency, analytical method, and desired accuracy level for each waste and debris to be managed in a permitted, storage, processing, or disposal unit at the facility.

This permit does not include any operational hazardous waste management units. Wastes will be sampled and analyzed in accordance with the closure plan for the Stormwater Pond. Table IV.C is included in Appendix IV.

D. Waste Analysis Plan

The Waste Analysis Plan must address the requirements of 40 CFR §264.13 and §268.7. The Plan should include supplemental and coordinating information on how the facility will analyze wastes and debris (as listed in Table IV.B) to be managed in permitted units. The plan must address the determination of land disposal restrictions. Generators must determine and certify with the manifest the land disposal restriction status of a waste, even if the waste or debris is not intended for land disposal. Land disposal treatment facilities must identify the treatment process and analytical procedures to be used, and include them in the waste analysis plan. Land disposal restriction records must be maintained at the facility until closure of the facility [40

CFR §264.73(b)]. Landfill facilities must determine through the Paint Filter Liquids Test (SW-846 Method 9095) if there is free liquid in a bulk or containerized waste to be landfilled. If so, it must be stabilized; adding adsorbents alone is not acceptable, even for containerized waste.

For off-site facilities the waste analysis plan must specify procedures which will be used to inspect and, if necessary, analyze each movement of industrial and hazardous waste or hazardous debris received at the facility to ensure it matches the identity ofthe waste designated on the accompanying shipping ticket. The plan must describe methods which will be used to determine the identity of each movement of waste and debris managed at the facility and sampling method used if the identification method includes sampling in order to store, process, or dispose of the wastes and debris in accordance with 40 CFR Parts 264 and 268 and any abnormal characteristics which may upset further treatment or processing operations. Include rejection criteria for shipments of waste and debris received at the facility

For on-site facilities the waste analysis plan must specify the normal characteristics of the waste (including EPA hazardous waste codes, EPA hazard codes, and 40 CFR Part 261, Appendix VIII Hazardous Constituents) which must be known to store, process, or dispose of the wastes and debris in accordance with 40 CFR Parts 264 and 268 and any abnormal characteristics which may upset further treatment or processing operations.

The methods and equipment used for sampling waste materials will vary with the form and consistency of the waste materials to be sampled. Those sampling methods listed in 40 CFR Part 261 Appendix I, for sampling waste with properties similar to the indicated materials, or equivalent sampling methods approved by EPA under 40 CFR §260.20 and §260.21, will be considered by the TCEQ to be acceptable.

Not applicable. This permit does not include any operational hazardous waste management units. Wastes will be sampled and analyzed in accordance with the closure plan for the Stormwater Pond. A summary waste analysis plan is included in Appendix IV.D.

V. Engineering Reports

Provide all Part B responsive information in Appendix V. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

For multiple units provide an include all Part B responsive information in a separate Appendix for each unit.

The engineering report represents the conceptual basis for the storage, processing, or disposal units at the hazardous waste management (HWM) facility. It should include calculations and other such engineering information as may be necessary to follow the logical development of the facility design. Plans and specifications are an integral part of the report. They should include construction procedures, materials specifications, dimensions, design capacities relative to the volume of wastes (as appropriate), and the information required by 40 CFR 270.14(b)(8), 270.14(b)(10). Since these reports may be incorporated into any issued permit, the report should not include trade names, manufacturers, or vendors of specific materials, equipment, or services unless such information is critical to the technical adequacy of the material. Technical specifications and required performance standards are sufficient to conduct a technical review. For landfills, surface impoundments, and waste piles, a Construction Quality Assurance Plan, which considers the guidance in EPA publication 530-SW-85-014, Minimum Technology Guidance on Double Liner Systems for Landfills and Surface Impoundments; Design, Construction, and Operation, and/or EPA/600/R-93/182, Quality Assurance And Quality Control For Waste Containment Facilities, should be submitted.

For facilities which will receive wastes from off-site sources, the engineering report must also contain information on the units which will manage these off-site wastes in accordance with 30 TAC 335.45(a).

Certain ancillary components or appurtenant devices must be addressed in the Part B application. These include but are not limited to sumps, pipelines, ditches, and canals. The technical information and the level of detail required will vary with the nature, scope, and location of the ancillary component. At a minimum they should be included in descriptions of piping and process flow. More information may be required. A single area containing a large number of ancillary components or a remote appurtenant device in an unusually sensitive location may warrant some specific permit requirements. All ancillary components must be included in calculating closure cost estimates.

In each of the unit-specific sections, describe precautions taken to prevent accidental commingling of incompatible wastes. If reactive or ignitable wastes are to be managed, or if incompatible wastes are deliberately commingled, provide information to ensure that precautions are taken to avoid danger due to:

- generation of extreme heat or pressure, fire, explosion, or violent reaction;
- production of uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health;
- production of uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosion;
- damaging the structural integrity of the device or facility containing the waste; or
- threatening human health or the environment by any other means.

Comprehensive consideration should be given to ensure that the facility is designed in accordance with good public health and hazardous waste management practices. The application will be evaluated primarily for the aspects of design covered by the regulations. Nothing in any approval is intended to relieve the facility owner or operator of any liabilities or responsibilities with respect to the design, construction, or operation of the project.

A. General Engineering Reports

1. General Information

Complete Table V.A. - Facility Waste Management Handling Units listing all past, current or proposed units. *[Indicate units' status as* Active, Closed, Inactive *(built but not yet managing waste)*, Proposed *(not yet built)*, Never Built, Transferred, or Post-Closure. *Indicate appropriate units for Capacity information.]* **Note for renewals and modifications involving adding or dropping units from the permit:** List all TCEQ Permit Unit Numbers that have been assigned previously as in a current permit Attachment D -Authorized Facility Units table and do not reuse or reassign permit numbers for units that have been replaced, closed, removed from the permit, or transferred to other ownership. All Notice of Registration (NOR) Numbers must match the State of Texas Environmental Electronic Reporting System (STEERS) and may not be reused for replacement units.

Provide an overall plan view of the entire facility. Identify each hazardous or industrial solid waste management unit (container storage area, tank, incinerator, etc.) to be permitted in relation to its location and the type of waste managed in that unit. Also provide a plan view at an appropriate scale to clearly show the location of all hazardous waste management units to be permitted on one or more 8 1/2" x 14" sheets. Indicate on this plan view how the design or operation provides for buffer zones or waste segregation as appropriate for incompatible, ignitable, or reactive wastes.

Submit a topographic map or maps of the facility which clearly shows the information specified in 40 CFR 270.14(b)(19), 270.14(c)(3), and 270.14(d)(1)(i) (for large HWM facilities, the TCEQ will allow the use of other scales on a case-by-case basis). Please note that the term "facility" includes all contiguous land, structures, other appurtenances, and improvements on the land for storing, processing, or disposing of hazardous and industrial solid waste.

Table V.A, plan views of the entire facility, and topographic maps are included in Appendix V.A.

2. Features to Mitigate Unsuitable Site Characteristics

For all new hazardous waste management storage and/or processing facilities or areal expansions of existing hazardous waste management storage and/or processing facilities, include in the engineering report design, construction, and operational information specified in 30 TAC 335.204(a)(1) and (a)(3) through (9).

Not applicable. This application is not for a new hazardous waste management facility or an expansion of an existing facility.

3. Construction Schedules

Not applicable. No operating hazardous waste management units are included in this application, and this is not a commercial facility.

a. In order to meet the required design standards, extensive retrofitting of some facilities may be required. In the worst case, the applicant may elect to close certain operations rather than comply with the RCRA standards. Thus, the permit may specify a schedule of compliance requiring the accomplishment of given tasks within specific time frames. As required, indicate an appropriate schedule(s) of compliance in this application. The

schedule should provide for facility compliance as soon as possible and in accordance with 40 CFR 270.33(a)(2) and 270.33(b).

b. For commercial hazardous waste management facilities, permit applications (new, renewal, or interim status applications), major amendments, and Class 3 modifications must include a construction schedule. A construction schedule must be submitted even if the application does not include an addition of units or a revision to permitted units. This schedule should comply with the requirements of 30 TAC 305.149.

4. Provide detailed plans and specifications which when, accompanied by the engineering report, will be sufficiently detailed and complete to allow the Executive Director to ascertain whether the facility will be constructed and operated in compliance with all pertinent permitting requirements. Engineering plans and specifications must be prepared under the supervision of and sealed by a licensed Professional Engineer, with current license, along with the Registered Engineering Firm's name and Registration Number as required by the Texas Engineering Practice Act. For some facilities, plans in the form of a standard piping and instrumentation diagram will be sufficient. Overall dimensions and materials of construction must be shown.

Not applicable. This application is not for construction of a new facility.

B. Container Storage Areas **Not applicable**

1. Provide an engineering report which includes all of the information specified in 40 CFR 264.170-264.173, 264.175-264.177, and 270.15.
Complete Table V.B - Container Storage Areas and list the container storage areas covered by this application to be permitted. List the N.O.R. unit number, the rated capacity or size of each unit (including the maximum number of each type of container to be stored at each unit and total maximum capacity of all types wastes stored in the unit), the areal dimensions, containment volume, aisle space requirements, whether ignitable, reactive, or incompatible waste will be stored in each unit, and whether processing will occur within the unit.

2. Container storage areas must have a containment system that is capable of collecting and holding spills, leaks, and precipitation. In addition to the requirements of 40 CFR 270.15, the design report should include the following:

a. Capacity of the containment relative to the number and volume of containers to be stored; in addition, for unenclosed areas, the amount of rainfall collected prior to removal. The TCEQ recommends using a 25-year, 24-hour rainfall event for this extra capacity; and

b. Run-on into the containment system must be prevented, or a collection system with sufficient excess capacity must be provided. If run-on is collected within the containment system, delineate the area(s) from which run-on is collected. The 25-year, 24-hour rainfall event should be used to calculate the excess capacity.

3. Wastes Containing No Free Liquids
With the exception of 40 CFR 264.175(d), storage areas that hold only wastes that do not contain free liquids need not have a containment system, provided that compliance with 40 CFR 264.175(c) is demonstrated. This demonstration must be submitted as part of the application and must include:

a. test procedures and results or other documentation or information to show that the wastes do not contain free liquids; and

b. a description of how the storage area is designed or operated to drain and remove liquids or how containers are kept from contact with standing

liquids.

4. Managing Ignitable or Reactive Wastes

   If a container storage area will manage ignitable or reactive waste, as indicated on Table V.B, provide in the engineering report drawings demonstrating compliance with the buffer zone requirement of 40 CFR 264.17 and 264.176.

5. Managing Incompatible Wastes

   If a container storage area will manage incompatible waste, as indicated on Table V.B, provide in the engineering report a description of the procedures used to ensure compliance with 40 CFR 264.17 and 264.177.

6. Managing Nonhazardous Wastes and/or Universal Wastes

   If a container storage area will manage nonhazardous wastes, and/or universal wastes in addition to hazardous waste, provide a description of all types of wastes managed in the engineering report and procedures used to ensure compliance with 40 CFR 264 Subpart I.

C. Tanks and Tank Systems **Not applicable**

Provide an engineering report which includes all of the information specified in 40 CFR 264.190-264.194, 264.196, 264.198-264.199, and 270.16.

1. For inclusion into a permit, complete Table V.C - Tanks and Tank Systems and list the tanks covered by this application to be permitted. List the N.O.R. unit number, whether the unit is for storage and/or processing, the waste managed in each unit, the rated capacity of each unit, overall dimensions of each unit, containment volume, and whether ignitable, reactive, or incompatible waste will be stored in each unit.

2. For inclusion into a permit, complete Table V.C - Tanks and Tank Systems and list the tanks covered by this application to be permitted. List the N.O.R. unit number, whether the unit is for storage and/or processing, the waste managed in each unit, the rated capacity of each unit, overall dimensions of each unit, containment volume, and whether ignitable, reactive, or incompatible waste will be stored in each unit.

3. If a tank will manage incompatible waste, as indicated on Table V.C, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.199.

4. Submit written assessments that were reviewed and certified by an independent, qualified licensed Professional Engineer that attests to the structural integrity and suitability of handling the hazardous waste for each tank system, as required under 40 CFR 264.191-264.192 for existing tanks which do not have secondary containment meeting the standards of 40 CFR 264.193. The engineer signing the written assessment must make the certification specified in 40 CFR 270.11(d). The certification must be sealed by a licensed Professional Engineer, with current license, along with the Registered Engineering Firm's name and Registration Number as required by the Texas Engineering Practice Act.

5. If a tank has been de-rated or if the permitted capacity is otherwise different from the design capacity, specify any such change(s) in the engineering report.

Provide in the report any additional information for tanks and tank systems as specified in the above regulatory citations including: specifics of leak, spill, and unfit for use systems responses; assessments of tank systems; new tank systems or components; overfill control and prevention; special requirements for ignitable and/or reactive wastes; incompatible wastes; air emissions control; detection of leaks into secondary containment; ancillary equipment; and plans and specifications individually sealed by a licensed professional engineer with current Texas registration with the Registered Engineering Firm's name and Registration number.

D. Surface Impoundments

For Surface Impoundments Closed as a Landfill

1. Provide as-built plans and specifications for the final cover system, individually for each unit that is sealed, signed and dated by a licensed professional engineer with current Texas registration along with the Registered Engineering Firm's name and Registration Number would satisfy this requirement; Other as-built plans and specifications for the unit may be submitted upon request.

The Bauxite Pond (NOR 007) and Moat (NOR 001) were certified closed as RCRA-regulated landfills on October 11, 1990 and April 9, 1991, respectively, with TCEQ acceptance on March 20, 1992. The acceptance of closure certifications is included in Appendix V.D. This application only addresses post-closure care and compliance monitoring or corrective action for these units; therefore, the unit-specific engineering reports are not submitted.

An Engineering Report describing the closure activities conducted to obtain interim closure of the Stormwater Pond (NOR 002) is included in Appendix V.D. The report is from the Part B application dated May 1998. This report is submitted for historical continuity and was previously reviewed and approved by TCEQ.

The interim closed Stormwater Pond acts as a catchment basin for rainwater that falls within the confines of the unit. A berm around the perimeter prevents run-on from entering the unit. Any rainwater that accumulates within the Stormwater Pond is pumped directly to the CPI oil/water separator or diverted to stormwater tank 400, which eventually flows to the CPI. The Stormwater Pond is inspected weekly and after significant rainfall events per Table III.D – Inspection Schedule to prevent releases of accumulated rainwater.

2. Complete Table V.D.1 - Surface Impoundments and list the surface impoundments, covered by this application, to be permitted. List the waste(s) managed in each unit and the rated capacity or size of each unit.

Table V.D.1 is included in Appendix V.D.

3. Complete Table V.D. 6. - Surface Impoundment Liner System for each surface impoundment to be permitted.

TablTable V.D.6 is included in Appendix V.D.

For Proposed or Active Surface Impoundments

Not applicable. This application does not include any proposed or active surface impoundments.

Provide an engineering report which includes all of the information specified in 30 TAC 305.50(a)(6), 335.168, 335.169, and 40 CFR 264.19, 264.220, 264.221, 264.222, 264.223, 264.226(a) and (c), 264.227, 264.229-264.231, and 270.17.

For storage surface impoundments at a new hazardous waste management facility or which are part of an areal expansion of an existing hazardous waste management facility, include in the engineering report design, construction, and operational information specified in 30 TAC 335.204(d). For any surface impoundment to be closed as a landfill (where wastes will remain after closure of the impoundment) at a new hazardous waste management facility or which are part of an areal expansion of an existing hazardous waste management facility, include in the engineering report design, construction, and operational information specified in 30 TAC 335.204(e).

For all impoundments, include in the report the following information.

1. Complete Table V.D.1 - Surface Impoundments and list the surface impoundments, covered by this application, to be permitted. List the waste(s) managed in each unit and the rated capacity or size of each unit.

2. If a surface impoundment will manage ignitable or reactive waste, as indicated on Table V.D.1., describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.229.

3. If a surface impoundment will manage incompatible waste, as indicated on Table V.D.1., describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.230.

4. If a surface impoundment will manage F020, F021, F022, F023, F026, and F027 waste, as indicated on Table V.D.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.231.

5. Describe the surface impoundment. Detailed plan view and cross-sectional drawings of the surface impoundment should be included with the engineering report.

6. Freeboard
   Specify the minimum freeboard to be maintained and the basis of the design to prevent overtopping resulting from normal or abnormal operations; overfilling; wind and wave action; rainfall; run-on; malfunctions of level controllers, alarms, and other equipment; and human error. Show that adequate freeboard will be available to prevent overtopping from a 100-year, 24-hour storm. [40 CFR 264.221(g)]
   If the impoundment is inflow sensitive, it should be equipped with a high-level alarm based on a different level sensor than that used for automatic control.

7. Waste Flow
   Describe the means that will be used to immediately shut off the flow of waste to the impoundment to prevent overtopping or in the event of liner failure, and include appropriate detailed drawings.
   If the surface impoundment is a flow-through facility describe the flow of waste, including a hydraulic profile.

8. Dike Construction

   a. If dikes are used, download the dike design and materials of construction engineering certification from the attachments **list** the following certification as part of the engineering report:

   b. The structural integrity of the dike system must be certified by a qualified

Professional Engineer before a permit is issued. If the impoundment is not being used, the dike licensed system must be certified before it can be put into use. The certification must be sealed by a licensed Professional Engineer, with current license, along with the Registered Engineering Firm's name and Registration Number as required by the Texas Engineering Practice Act.

c. A report shall accompany the dike certification which summarizes the activities, calculations, and laboratory and field analyses performed in support of the dike certification. Describe the design basis used in construction of the dikes. Provide the following analyses as attachments to the engineering report (A Quality Assurance Project Plan <QAPP> should be included in the report to ensure that each analysis is performed appropriately):

(1) Slope Stability Analysis
(2) Hydrostatic and Hydrodynamic Analysis
(3) Storm Loading
(4) Rapid Drawdown

d. Earthen dikes should have a protective cover to minimize wind and water erosion and to preserve the structural integrity of the dike. Describe the protective cover used and describe its installation and maintenance.

9. Containment System

We suggest that the applicant use available recognized guidance documents, such as EPA publication 530-SW-85-014, which provide design guidance for liner systems. The applicant is strongly encouraged to test each synthetic liner after installation by an electrical leak location test, such as the electric field method described in EPA Technical Guidance Document EPA/600/R-93/182, Quality Assurance and Quality Control for Waste Containment Facilities, or an equivalent method, such as those found in ASTM publications, and approved by the Executive Director. Construction above the liner may not proceed until any detected leaks are sealed.

a. Complete Table V.D. 6. - Surface Impoundment Liner System for each surface impoundment to be permitted.

b. In the engineering report, describe the design, installation and operation of liner and leak detection components. The description must demonstrate that the liner and leak detection system will prevent discharge to the land, and ground and surface water. Include the following analyses as attachments to the engineering report (A QAPP should be included in the report to ensure that each analysis is performed appropriately):

For artificial liners:

(1) Seaming method
(2) Surface preparation method
(3) Tensile Strength
(4) Impact Resistance
(5) Compatibility Demonstration
(6) Foundation Design (including Settlement Potential, Bearing Capacity and Stability, and Potential for Bottom Heave Blow-out)

For soil liners:

(1) Waste Migration Analysis (based on head, porosity, and permeability) for the most mobile and least attenuated waste constituents
(2) Atterberg Limits, % passing a #200 sieve, and Permeability

(3) Moisture Content
(4) Standard Proctor Density, Compaction Data

For leachate collection systems:

(1) Pipe Material and Strength
(2) Pipe Network Spacing and Grading
(3) Collection Sump(s) Material and Strength
(4) Drainage Media Specifications and Performance
(5) Analyses showing that pipe and pipe perforation size will prevent clogging and allow free liquid access to the pipe.
(6) Compatibility Demonstration
(7) Capacity of System
    (a) rate of leachate removal
    (b) capacity of sumps
    (c) thickness of mounding and maximum hydraulic head

c. Specify the liner system installation date and expected lifetime of liner system (years).

d. Specify whether the liner is chemically resistant to the waste and how this resistance was determined. Attach any tests or documentation to the engineering report.

e. Submit a quality assurance/quality control plan for all components to demonstrate that all components will be properly installed and will perform to design specifications.

f. Submit a Response Action Plan that proposes actions to be taken if the Action Leakage Rate for the surface impoundment exceeds. At a minimum the Response Action Plan must include the requirements of 40 CFR 264.223.

10. Surface impoundments that receive waste on or after May 8, 1985 (or for newly-regulated units, the effective date of the new RCRA regulation) into new units and/or lateral expansions or replacements of existing units must meet the minimum technological requirements of the Hazardous and Solid Waste Amendments of 1984, unless an appropriate waiver is granted by the Commission. The owner or operator of each new surface impoundment unit for which the construction commences after January 29, 1992, or each lateral expansion of an existing surface impoundment unit where construction commences after July 29, 1992, or replacement of an existing surface impoundment unit that commence reuse after July 29, 1992 must install two or more liners and leachate collection and removal system unless commission approves alternate design or operating practices. Plans and specifications for both new and existing surface impoundments must demonstrate conformity with 30 TAC 335.168 and 40 CFR 264.221

11. Run-on Diversion

    Describe in detail how the surface impoundment system will manage stormwater run-on away from the surface impoundment. Stormwater run-on must be diverted away from a surface impoundment. Use at least a 100-year, 24-hour rainfall event in the design and analysis of diversion structures. Where dikes are used to divert run-on, they must be protected from erosion. Include all analyses used to calculate run-on volumes.

12. The Commission may approve an alternate design or operating practice for a surface impoundment if the owner or operator demonstrates that such design or operating practices, together with location characteristics [40 CFR

264.221(d)]:

a. Will prevent the migration of hazardous constituents into the groundwater or surface water at least as effectively as the liners and leachate collection and removal system required by 40 CFR 264.221; and

b. Will allow detection leaks of hazardous constituents through the top liner at least as effectively.

13. Exemption from Double-Liner Requirements for Monofills [264.221(e)]

Owners or operators of hazardous waste surface impoundment monofills will be exempted from the double-liner requirements if the Commission finds, based on a demonstration by the owner or operator, that alternative design and operating practices, together with location characteristics are at least as effective as a double liner in preventing migration of hazardous constituents to the groundwater or surface water. If an exemption is sought, submit detailed plans and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the groundwater or surface water at any future time.

E. Waste Piles

Not Applicable

This section applies to owners or operators of industrial solid waste facilities that store or process hazardous waste in piles. A hazardous waste pile that will be closed with wastes left in place must be managed as a landfill. Existing portions of waste piles are those areas that were listed on the original Part A and on which wastes have been lawfully placed.

For Waste Piles Closed as a Landfill

1. Provide as-built plans and specifications for the final cover system, individually for each unit that is sealed, signed and dated by a licensed professional engineer with current Texas registration along with the Registered Engineering Firm's name and Registration Number would satisfy this requirement; Other as-built plans and specifications for the unit may be submitted upon request.
2. Complete Table V.E.1 - Waste Piles and list the waste piles covered by this application. List the waste managed in each unit and the rated capacity or size of the unit.
3. Complete Table V.E. 3 - Waste Pile Liner System and specify the type of containment/ liner system.

   Provide an engineering report which includes all of the information specified in 30 TAC 335.170 and 40 CFR 264.19, 264.250, 264.251, 264.252-264.253, 264.254(a) and (c), 264.256, 264.257, 264.259, and 270.18.

   For waste piles at a new hazardous waste management facility or which are part of any areal expansion of an existing hazardous waste management facility, include in the engineering report design, construction, and operational information specified in 30 TAC 335.204(c).

   For all waste piles, include in the report the following information.

   1. For inclusion into a permit, complete Table V.E.1 - Waste Piles and list the waste piles covered by this application. List the waste managed in each unit and the rated capacity or size of the unit.

   2. If a waste pile will manage ignitable or reactive waste, as indicated on Table

V.E.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.256.

3. If a waste pile will manage incompatible waste, as indicated on Table V.E.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.257.

4. If a waste pile will manage F020, F021, F022, F023, F026, and F027 waste, as indicated on Table V.E.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.259.

5. Describe the waste pile, including any structure surrounding or enclosing the waste pile.

6. Containment System
We suggest that the applicant use available recognized guidance documents, such as EPA publication 530-SW-85-014, which provide design guidance for liner systems. The applicant is strongly encouraged to test each synthetic liner after installation by an electrical leak location test, such as the electric field method described in EPA Technical Guidance Document EPA/600/R-93/182, Quality Assurance and Quality Control for Waste Containment Facilities, or an equivalent method, such as those found in ASTM publications, and approved by the Executive Director. Construction above the liner may not proceed until any detected leaks are sealed.

   a. For inclusion into a permit, complete Table V.E. 3 - Waste Pile Liner System and specify the type of containment/liner system.

   b. In the engineering report, describe the design, installation, construction, and operation of the liner and leachate collection system. The description must demonstrate that containment systems will prevent discharge to the land, surface water, or groundwater. Include the following analyses as attachments to the engineering report, when applicable to the containment system being described (A QAPP should be included in the report to ensure that each analysis is performed appropriately):

For artificial liners:

(1) Seaming method
(2) Surface preparation method
(3) Tensile Strength
(4) Impact Resistance
(5) Compatibility Demonstration
(6) Foundation Design (including Settlement Potential, Bearing Capacity and Stability, and Potential for Bottom Heave Blow-out)

For soil liners:

(7) Waste Migration Analysis (based on head, porosity, and permeability) for the most mobile and least attenuated constituents.
(8) Atterberg Limits, % passing a #200 sieve, and Permeability
(9) Moisture Content
(10) Standard Proctor Density, Compaction Data

For leachate detection, collection, and removal system:

(11) Capacity of system
   (a) rate of leachate removal
   (b) capacity of sumps

(c) thickness of mounding and maximum hydraulic head

(12) Pipe Material and Strength
(13) Pipe Network Spacing and Grading
(14) Collection Sump(s) Material and Strength
(15) Drainage Media Specifications and Performance
(16) Analysis showing that pipe and perforation size will prevent clogging and allow free liquid access to the pipe.
(17) Compatibility Demonstration

c. Containment/liner system installation date and expected lifetime of liner system (years).

d. Specify whether the containment/liner system is chemically resistant to the waste and how this resistance was determined. Attach any tests or documentation to the engineering report.

e. Submit a quality assurance/quality control plan for all components to demonstrate that all components will be properly installed and will perform to design specifications.

f. Submit a Response Action Plan that proposes actions to be taken if the Action Leakage Rate for the waste pile exceeds. At a minimum the Response Action Plan must include the requirements of 40 CFR 264.253.

7. Wind Dispersal [30 TAC 335.170(j)]

Waste piles containing hazardous waste which could be subject to dispersal by wind must be covered or otherwise managed so that wind dispersal is minimized. Describe practices to control wind dispersal (e.g., cover or frequent wetting) of the hazardous waste.

8. Run-on Diversion [30 TAC 335.170(g)]

Describe in detail the measures used to control and divert run-on from the unit. The owner or operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the pile during peak discharge from at least a 100-year, 24-hour storm.

Include all analyses used to calculate: flow rates; run-on volume and depth; and back-water calculations for the ditches on plant property.

Any tanks or basins associated with the run-on control systems must be emptied or otherwise managed expeditiously after a storm to maintain the design capacity of the system. [30 TAC 335.170(i)]

9. Run-off Control [30 TAC 335.170(h)]

Describe in detail the measures used to control run-off from the unit. Include all analyses used to calculate the run-off volumes.

The owner or operator must design, construct, operate, and maintain a run-off management system to collect and control at least the water volume resulting from a 100-year, 24-hour storm.

Collection and holding facilities (e.g., tanks or basins) associated with the run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain the design capacity of the system. [30 TAC 335.170(i)]

10. Give a description of design and operating procedures to properly manage and/ or dispose of any residuals (e.g., leachate) that may be generated during waste

management. Describe the management process and any equipment used.

11. Provide a description and list of all equipment and procedures used to place thewaste in or on the waste pile, and how the liner surface will be exposed for inspection, if necessary. A containment system must be protected from plant growth which could puncture any component of the system.

12. Exemption from Liner and Leachate Collection Requirements

The Commission may approve an alternate design or operating practice for a waste pile if the owner or operator demonstrates that such design or operating practices, together with location characteristics [40 CFR 264.251(d)]:

a. Will prevent the migration of hazardous constituents into the groundwater or surface water at least as effectively as the liners and leachate collection and removal system; and

b. Will allow detection leaks of hazardous constituents through the top liner at least as effectively.

13. Exemption from Groundwater Monitoring under 40 CFR 264.250(c)

A waste pile may be exempt from groundwater monitoring if the following standards are met:

a. The waste pile (including its underlying liners) must be located entirely above the seasonal high water table; and

b. The waste pile is inside or under a structure that provides protection from precipitation so that neither run-off nor leachate is generated, provided that:

(1) Liquids or materials containing free liquids are not placed in the pile;

(2) The waste pile is protected from surface water run-on by the structure or in some other manner;

(3) The waste pile is designed and operated to control dispersal of the waste by wind, where necessary, by means other than wetting; and

(4) The waste pile will not generate leachate through decomposition or other reactions; or

c. The waste pile must have a leachate collection and removal system above the top liner; and

d. Underlayment:

(1) either:

(a) The waste pile must be underlain by two liners, which are designed and constructed in a manner that prevents the migration of liquids into or out of the space between the liners and a leak detection system which must be designed, constructed, maintained, and operated between the liners to detect any migration of liquids into the space between the liners; and

(b) A demonstration must be made that there is a low potential for migration of liquid from the waste pile to the uppermost aquifer during the life of the waste pile (including the closure period). The owner or operator must base any predictions made on assumptions that

maximize the rate of liquid migration;

(2) or:

(a) The waste pile must be underlain by a liner (base) that is designed, constructed, and installed in a manner that prevents the migration of liquids or waste beyond the liner; and

(b) The wastes in the waste pile must be removed periodically, and the liner must be inspected for deterioration, cracks, or other conditions that may result in leaks. The frequency of inspection will be specified in the inspection plan and must be based on the potential for the liner (base) to crack or otherwise deteriorate under the conditions of operation (e.g., waste type, rainfall, loading rates and subsurface stability).

The liner(s) used to satisfy V.D.13.d. must be of sufficient strength and thickness to prevent failure due to puncture, cracking, tearing, or other physical damage from equipment used to place waste in or on the pile or to clean and expose the liner surface for inspection.

F. Land Treatment Units

Not Applicable

Provide an engineering report which includes all of the information specified in 30 TAC 305.50(a)(6), 335.171, 335.172, 40 CFR 264.270-264.272, 264.273, 264.276, 264.278, 264.279, 264.281-264.283, and 270.20 for each land treatment unit.

For land treatment units at a new hazardous waste management facility or which are part of an areal expansion of an existing hazardous waste management facility, include in the engineering report design, construction, and operational information specified in 30 TAC 335.204(b).

For all land treatment units, include in the report the following information.

1. Complete Tables V.F.1 - Land Treatment Units and V.F.2 - Land Treatment Unit Capacity and list the land treatment units covered by this application. List the waste(s) managed in each unit and the rated capacity or size of the unit. If different wastes are placed on separate portions of the land treatment area, each portion is considered a land treatment unit, and requires a separate summary form and engineering report.

   The treatment zone is defined as the soil area of the unsaturated zone of a land treatment unit within which hazardous constituents are degraded, transformed, or immobilized. In this section, specify the depth of the treatment zone. The maximum depth of the treatment zone for new land treatment units must be [40 CFR 264.271(c)]:

   a. No more than 1.5 meters (5 feet) from the surface; and

   b. More than 1 meter (3 feet) above the seasonal high water table.

2. If a land treatment unit will manage ignitable or reactive waste, as indicated on Table V.F.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.281.

3. If a land treatment unit will manage incompatible waste, as indicated on Table V.F.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.282.

4. If a land treatment unit will manage F020, F021, F022, F023, F026 and F027 waste, as indicated on Table V.F.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.283.

5. Describe the land treatment unit. The report shall include all the information requested in this section including drawings. At a minimum, a plan view and cross-section of the unit should be included with the engineering report.

6. Complete Table V.F.3. - Land Treatment Principal Hazardous Constituents and list the wastes for which the treatment demonstration will be made and the principal hazardous constituents in each waste. Specify in the report the data sources to be used to make the demonstration such as laboratory data, field data, operating data, literature, or other.

7. Run-on Diversion
   Describe in detail the measures used to control run-on and divert run-on from the unit. Include all the analyses used to calculate the run-on volumes.
   The owner or operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the land treatment unit during peak discharge from a 100-year, 24-hour storm. [30 TAC 335.171(3)]
   Collection holding facilities (e.g., tanks or basins) associated with the run-on control system must be emptied or otherwise managed expeditiously after storms to maintain the design capacity of the system. [30 TAC 335.171(5)].

8. Run-off Control
   Describe in detail the measures used to control the run-off from the unit, and minimize hazardous constituents in the run-off, include all the analyses used to calculate the run-off volumes.
   The owner or operator must design, construct, operate and maintain a run-off management system to collect and control at least the water volume resulting from a 100-year, 24-hour storm. [30 TAC 335.171(4)]
   Collection and holding facilities (e.g., tanks or basins) associated with run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system. [30 TAC 335.171(5)]

9. Wind Dispersal
   The owner or operator of a land treatment unit containing hazardous waste which could be subject to dispersal by wind must cover or otherwise manage the land treatment unit so that wind dispersal is minimized. Describe practices to control wind dispersal (e.g., cover or frequent wetting) of the hazardous waste. [30 TAC 335.171(6)]

10. Treatment Demonstration
    A description of the treatment demonstration required under 40 CFR 264.272 and 270.20(a) shall be included with the engineering report. If the owner or operator intends to conduct field tests or laboratory analyses in order to make the demonstration, he must obtain a treatment or disposal permit.

11. The owner or operator must establish an unsaturated zone monitoring program in accordance with 40 CFR 264.278 and a detailed monitoring program must be included in the application.

12. Food Chain Crops [40 CFR 264.276]

Several conditions must be satisfied if food-chain crops are to be grown in or on the treatment zone. A demonstration must be prepared similar to the one described in the Treatment Demonstration and submitted at least 90 days prior to the planting of crops. The demonstration need not be submitted with this application. However, a description of the demonstration must be included as part of the engineering report. This demonstration may be combined with the Treatment Demonstration description, as some of the information required is identical.

G. Landfills

Not Applicable

For Closed Landfills

1. Provide as-built plans and specifications for the final cover system, individually for each unit that is sealed, signed and dated by a licensed professional engineer with current Texas registration along with the Registered Engineering Firm's name and Registration Number would satisfy this requirement; Other as-built plans and specifications for the unit may be submitted upon request.

2. Complete Table V.G.1 - Landfills and list the landfills (and number of cells, if applicable) covered by this application. List the waste(s) managed in each unit and the rated capacity or size of the unit. If wastes are segregated in some manner, list the cell number in which wastes are placed next to each waste type.

3. Complete Table V.G.3. - Landfill Liner System and specify the type of liner used for the landfill.

4. Complete Table V.G.4. - Landfill Leachate Collection System used for the landfill.

Provide an engineering report which includes all of the information specified in 30 TAC 305.50(a)(5), (6), (9), (10), and (12), 335.173, 40 CFR 264.19, 264.300, 264.301, 264.302, 264.303(a), 264.304, 264.309, 264.312, 264.313, 264.315-264.317, and applicable requirements of 270.21. The text of the report should be written to supplement engineering plans, specifications, and test results necessary to provide a detailed description of how the landfill will comply with these standards.

For landfills at a new hazardous waste management facility or which are part of an areal expansion of an existing hazardous waste management facility, include in the engineering report design, construction, and operational information specified in 30 TAC 335.204(e).

For all landfills, include in the report the following information.

1. Complete Table V.G.1 - Landfills and list the landfills (and number of cells, if applicable) covered by this application. List the waste(s) managed in each unit and the rated capacity or size of the unit. If wastes are segregated in some manner, list the cell number in which wastes are placed next to each waste type.

2. If a landfill will manage ignitable or reactive waste, as indicated on Table V.G.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.312.

3. If a landfill will manage incompatible waste, as indicated on Table V.G.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.313.

4. If a landfill will manage F020, F021, F022, F023, F026, and F027 waste, as indicated on Table V.G.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.317.

5. Describe the landfill. A plan view and cross-section of the landfill should be included with the engineering report. As appropriate, detailed plan, elevation, cross-section of landfill containment facilities shall be included with the report.

6. Containment System
We suggest that the applicant use available recognized guidance documents, such as EPA publication 530-SW-85-014, which provide design guidance for liner systems. The applicant is strongly encouraged to test each synthetic liner after installation by an electrical leak location test, such as the electric field method described in EPA Technical Guidance Document EPA/600/R-93/182, Quality Assurance and Quality Control for Waste Containment Facilities, or an equivalent method, such as those found in ASTM publications, and approved by the Executive Director. Construction above the liner may not proceed until any detected leaks are sealed.

   a. Complete Table V.G.3. - Landfill Liner System and specify the type of liner used for the landfill.

   b. In the engineering report, describe the design, installation, construction, and operation of the liner and leachate collection system. The description must demonstrate that the liner system will prevent discharge to the land, groundwater, and surface water. The following analyses should be included as attachments to the engineering report (A QAPP should be included in the report to ensure that each analysis is performed appropriately):

For artificial liners:

(1) Seaming method
(2) Surface preparation method
(3) Tensile Strength
(4) Impact Resistance
(5) Compatibility Demonstration
(6) Foundation Design (including Settlement Potential, Bearing Capacity and Stability, and Potential for Bottom Heave Blow-out)

For soil liners:

(7) Waste Migration Analysis (based on head, porosity, and permeability) for the most mobile and least attenuated waste constituents
(8) Atterberg Limits, % passing a #200 sieve, and Permeability
(9) Moisture Content
(10) Standard Proctor Density, Compaction Data

For Leachate Collection System

For incorporation into the permit, complete Table V.G.4. - Landfill Leachate Collection System and Table V.G.5 - Landfill Soil Specifications used for the

landfill.

(11) Capacity of the system:
  (a) rate of leachate removal
  (b) capacity of sumps
  (c) thickness of mounding and maximum hydraulic head
(12) Pipe Material and Strength
(13) Pipe Network Spacing and Grading
(14) Collection Sump(s) Material and Strength
(15) Drainage Media Specifications and Performance
(16) Analyses showing that pipe and pipe perforation size will prevent clogging and allow free liquid access to the pipe.
(17) Compatibility Demonstration

c. State whether the liner system components are chemically resistant to the waste and how this resistance was determined. Attach any tests or documentation to the engineering report.

d. Provide a quality assurance/quality control plan for all components to demonstrate that all components will be properly installed and will perform to design specifications.

e. Whether the leachate collection components are chemically resistant to the waste and how this resistance was determined. Attach any tests or documentation to the engineering report.

f. Provide a Response Action Plan that proposes actions to be taken in the case of exceedance of the landfill Action Leakage Rate. At a minimum the Response Action Plan must include the requirements of 40 CFR 264.304.

7. For Dikes:
   a. Slope Stability Analysis;
   b. Hydrostatic and Hydrodynamic Analyses
   c. Ability to withstand scouring from leaking liner.

8. Landfills that receive waste on or after May 8, 1985 (or for newly-regulated units, the effective date of the new RCRA regulation) into new units and/or lateral expansions or replacements of existing units must meet the minimum technological requirements of the Hazardous and Solid Waste Amendments of 1984, unless an appropriate waiver is granted by the Commission. The owner or operator of each new landfill unit for which the construction commences after January 29, 1992, or each lateral expansion of an existing landfill unit where construction commences after July 29, 1992, or replacement of an existing landfill unit that commence reuse after July 29, 1992 must install two or more liners and leachate collection and removal system unless commission approves alternate design or operating practices. Plans and specifications for both new and existing landfills must demonstrate conformity with 30 TAC 335.173 and 40 CFR 264.301(c).

9. Site Development Plan

   Describe the methods used to deposit waste in the landfill. This description should include rate of waste deposition, waste segregation, average lift size, maximum lift, average cell or trench size, maximum cell or trench size, and other information necessary to depict how the landfill will be developed. Do not

include liner or leachate collection system information, closure information, or handling of special wastes. This will be included elsewhere in the report.

10. Run-on Control [30 TAC 335.173(g)]

    The owner or operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the landfill during peak discharge from at least a 100-year, 24-hour storm.

    In the engineering report, include the following analyses:

    a. Run-on volume and depth calculations from the peak discharge of the 100-year, 24-hour storm; and

    b. For ditches on the plant property, back-water calculations.

    Collection and holding facilities (e.g., tanks or basins) associated with the run-on control system must be emptied or otherwise managed expeditiously. [30 TAC 335.173(i)]

11. Run-off Control [30 TAC 335.173(h)]

    The owner or operator must design, construct, operate, and maintain a run-off management system to collect and control the water volume resulting from a 100-year, 24-hour storm.

    Include all analyses used to calculate run-off volumes.

    Collection and holding facilities (e.g., tanks or basins) associated with run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system. [30 TAC 335.173(i)]

12. Wind Dispersal [30 TAC 335.173(j)]

    If the landfill contains any particulate matter which may be subject to wind dispersal, the owner or operator must cover or otherwise manage the landfill to minimize wind dispersal. Based upon the characteristics of the material to be landfilled describe the likelihood of wind dispersal occurring. Describe in detail any method and/or control mechanism used to prevent wind dispersal.

13. Liquid Waste

    If liquid waste or waste containing free liquids is to be stabilized and then placed in the landfill, the procedures used to stabilize the waste must be described in the engineering report. The waste must be treated prior to landfilling using a treatment technology that does not solely involve the use of a material that functions primarily as a sorbent. Provide supporting documentation to verify that an appropriate stabilization procedure is used to comply with 30 TAC 335.175.

14. The Commission may approve an alternate design or operating practice for a landfill if the owner or operator demonstrates that such design or operating practices, together with location characteristics [40 CFR 264.301(d)]:

    a. Will prevent the migration of hazardous constituents into the groundwater or surface water at least as effectively as the liners and leachate collection and removal system; and

    b. Will allow detection leaks of hazardous constituents through the top liner at

least as effectively.

15. Exemption from Double-Liner Requirements for Monofills [264.301(e)]

Owners or operators of hazardous waste monofills will be exempted from the double-liner requirements if the Commission finds, based on a demonstration by the owner or operator, that alternative design and operating practices, together with location characteristics are at least as effective as a double liner in preventing migration of hazardous constituents to the groundwater or surface water. If an exemption is sought, submit detailed plans and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the groundwater or surface water at any future time.

16. Above-grade Benefits

The engineering report must evaluate the benefits, if any, associated with the construction of the landfill above existing grade at the proposed site, the costs associated with the above-grade construction, and the potential adverse effects, if any, which would be associated with the above-grade construction. [TX. Health and Safety Code 361.108]

17. Feasibility Study - Applicable to New Hazardous Waste Landfills or Areal Expansions of Existing Hazardous Waste Landfill

In accordance with the Health and Safety Code Section 361.106 and 30 TAC Section 335.205(a)(2), provide a feasibility study demonstrating that there is no practical, economic, and feasible alternative that is reasonably available to manage the types and classes of hazardous wastes to be disposed of at a proposed new hazardous waste landfill or the areal expansion of an existing hazardous waste landfill.

H. Incinerators

Not Applicable

Engineering Report for Combustion Units

For hazardous waste combustion unit which are subject to regulation by 40 CFR Part 63, Subpart EEE, the requirements 30 TAC Chapter 305 and Subchapters I and Q do not apply when the unit becomes subject to Resource Conservation and Recovery Act (RCRA) permit requirements after October 12, 2005 (i.e., new unit), or no longer apply when an owner or operator of an existing hazardous waste management unit demonstrates compliance with the air emission standards and limitations in 40 Code of Federal Regulations (CFR) Part 63, Subpart EEE, except for the following:

1. Those provisions the Executive Director determines are necessary to comply with 40 CFR §264.345(a) and 40 CFR §264.345(c) for Phase I sources or 40 CFR §266.102(e)(1) and (2)(iii) for Phase II sources if the permittee or applicant elects to comply with any of the options listed in 40 CFR §270.235(a) to minimize emissions of toxic compounds from startup, shutdown, and malfunction events;

2. Those standards and associated requirements for particulate matter, hydrogen chloride and chlorine gas, and non-mercury metals that a Phase II area source elects to comply with in 40 CFR §§266.105, 266.106, and 266.107;

3. Those standards for particulate matter in 40 CFR 264.343(c) remain in effect for a Phase I source incinerator that elects to comply with the alternative to the

particulate matter standard under 40 CFR 63.1206(b)(14) and 63.1219(e); and

4. Those provisions that the Executive Director may apply in 30 TAC Chapter 305, Subchapters I and Q, on a case-by-case basis. The Executive Director may require a permittee or an applicant to submit information in order to establish permit conditions under §305.50(a)(15) or (16) and §305.127(1)(B)(iii) or (4)(A) (i.e., risk-based permit conditions).

For hazardous waste combustion units subject to regulation by 40 CFR Part 63, Subpart EEE, some of the information requested in Sections V.H and V.I. will not be applicable for new units or existing units which have submitted a Notification of Compliance in accordance with 40 CFR 63.1207(j) and 63.1210(d), received a Finding of Compliance pursuant to 40 CFR 63.1206(b)(3), and have the associated RCRA permit conditions removed from the permit. Information which is not applicable or no longer applicable should not be included in the Part B application. *[Please note that the TCEQ will require a Finding of Compliance be made prior to modifying the permit by deleting redundant operating parameter limits and standards for the combustion units. Until such time as the permit is modified to delete the redundant RCRA-based operating parameter limits and standards in the permit or the permit is terminated or revoked, the permittee must comply with the RCRA-based conditions specified in the permit. More stringent risk-based permit conditions will remain in the RCRA permit.]*

For the exceptions listed in Items 1.-4., the owner and operator must provide the applicable information requested in the Part B permit application and any additional information required by the Executive Director to establish permit conditions.

As applicable, provide an engineering report which includes all of the information specified in 30 TAC 305.171-305.176, 40 CFR 264.340, 264.342-264.346, 264.347(a), and 270.19. In addition, the Executive Director may require additional information to address the requirements in 30 TAC 305.50(a)(15).

Note: Please review the information provided in the section above entitled "Engineering Report for Combustion Units" and 40 CFR 270.19(e) to determine applicability of standards and associated requirements in 40 CFR Part 264, Subpart O. If the permit contains risk-based permit conditions, please ensure that all applicable supporting information is included in the engineering report.

1. Complete Table V.H.1 - Incinerators and list the incinerators covered by this application and list the waste managed in each unit.

2. Complete Table V.H.2 - Incinerator Permit Conditions, Monitoring, and Automatic Waste Feed Cutoff Systems for each Incinerator.

3. Complete Table V.H.3 - Maximum Constituents Feed Rate for each Incinerator.

4. Complete Table V.H.4 - Maximum Allowable Emission Rates for each Incinerator.

5. For use during the shakedown period, the trial burn period and the period after completion of the initial trial burn, complete Table V.H.5 - Incinerator Permit Conditions, Monitoring, and Automatic Waste Feed Cutoff-Short-Term Operation for each new or modified Incinerator.

6. If an incinerator will manage reactive or incompatible waste, as indicated on Table V.H.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17.

7. If an incinerator will manage F020, F021, F022, F023, F026, and F027 waste, as

indicated on Table V.H.1, the DRE requirement is 99.9999%.

8. If a trial burn for a modified unit and Comprehensive Performance Test under 40 CFR Part 63, Subpart EEE (HWC MACT) (for all new and modified units) will be performed, designate one or more of the 40 CFR 261 Appendix VIII organic compounds present in the wastes to be incinerated as Principal Organic Hazardous Constituents (POHCs). Selection will be based upon the degree of difficulty of incineration of these compounds and upon their concentration or mass in the waste feed. These POHCs will be used to determine the destruction and removal efficiency (DRE) specified in the performance standards of 40 CFR 264.343 and HWC MACT. In addition, complete Table V.H.8 - Principal Organic Hazardous Constituents.

9. Submit a Quality Control/Quality Assurance Plan for all sampling, analysis, and monitoring activities which will occur in conjunction with the trial burn.

10. As applicable, facilities with existing permits may request that the Executive Director to address permit conditions that minimize emissions from startup, shutdown, and malfunction events in accordance with the options under 40 CFR 270.235 when requesting the removal of permit conditions that are no longer applicable according to 30 TAC 305.175. Please provide the relevant information needed to process the requested option to minimize emissions identified in 40 CFR 270.235(1)(a)(i)-(iii). (30 TAC 305.176)

I. Boilers and Industrial Furnaces

Not Applicable

Engineering Report for Combustion Units

For hazardous waste combustion unit which are subject to regulation by 40 CFR Part 63, Subpart EEE, the requirements 30 TAC Chapter 305 and Subchapters I and Q do not apply when the unit becomes subject to Resource Conservation and Recovery Act (RCRA) permit requirements after October 12, 2005 (i.e., new unit), or no longer apply when an owner or operator of an existing hazardous waste management unit demonstrates compliance with the air emission standards and limitations in 40 Code of Federal Regulations (CFR) Part 63, Subpart EEE, except for the following:

1. Those provisions the Executive Director determines are necessary to comply with 40 CFR §264.345(a) and 40 CFR §264.345(c) for Phase I sources or 40 CFR §266.102(e)(1) and (2)(iii) for Phase II sources if the permittee or applicant elects to comply with any of the options listed in 40 CFR §270.235(a) to minimize emissions of toxic compounds from startup, shutdown, and malfunction events;

2. Those standards and associated requirements for particulate matter, hydrogen chloride and chlorine gas, and non-mercury metals that a Phase II area source elects to comply with in 40 CFR §§266.105, 266.106, and 266.107;

3. Those standards for particulate matter in 40 CFR 264.343(c) remain in effect for a Phase I source incinerator that elects to comply with the alternative to the particulate matter standard under 40 CFR 63.1206(b)(14) and 63.1219(e); and

4. Those provisions that the Executive Director may apply in 30 TAC Chapter 305, Subchapters I and Q, on a case-by-case basis. The Executive Director may require a permittee or an applicant to submit information in order to establish permit conditions under §305.50(a)(15) or (16) and §305.127(1)(B)(iii) or (4)(A) (i.e., risk-based permit conditions).

For hazardous waste combustion units subject to regulation by 40 CFR Part 63, Subpart EEE, some of the information requested in Sections V.H and V.I. will not be applicable for new units

or existing units which have submitted a Notification of Compliance in accordance with 40 CFR 63.1207(j) and 63.1210(d), received a Finding of Compliance pursuant to 40 CFR 63.1206(b)(3), and have the associated RCRA permit conditions removed from the permit. Information which is not applicable or no longer applicable should not be included in the Part B application. *[Please note that the TCEQ will require a Finding of Compliance be made prior to modifying the permit by deleting redundant operating parameter limits and standards for the combustion units. Until such time as the permit is modified to delete the redundant RCRA-based operating parameter limits and standards in the permit or the permit is terminated or revoked, the permittee must comply with the RCRA-based conditions specified in the permit. More stringent risk-based permit conditions will remain in the RCRA permit.]*

For the exceptions listed in Items 1.-4., the owner and operator must provide the applicable information requested in the Part B permit application and any additional information required by the Executive Director to establish permit conditions.

As applicable, provide an engineering report which includes all of the information specified in 30 TAC 305.50(a)(13), 305.571-573, 40 CFR 266.100 and 266.102 (as incorporated by reference in 30 TAC 335.221 through 335.225), 266.104-266.112, and 270.22. In addition, the Executive Director may require additional information to address the requirements in 30 TAC 305.50(a)(15).

Note: Please review the information provided in the section above entitled "Engineering Report for Combustion Units" and 40 CFR 270.22 to determine applicability of standards and associated requirements in 40 CFR Part 266, Subpart H. Area sources that elect to comply with the standards and associated requirements of 40 CFR 266.105, 266.106, and 266.107 should address those elected standards and requirements in the engineering report. If the permit contains risk-based permit conditions, please ensure that all applicable supporting information is included in the engineering report.

1. Complete Table V.I.1 - Boilers and Industrial Furnaces and list the boilers and/or industrial furnaces covered by this application to be permitted and list the waste managed in each unit.
2. Complete Table V.I.2 - Boiler and Industrial Furnace Permit Conditions, Monitoring, and Automatic Waste Feed Cutoff Systems for each unit.
3. Complete Table V.I.3 - Maximum Constituent Feed Rate for each unit.
4. Complete Table V.I.4 - Maximum Allowable Emission Rates for each unit.
5. For use during the shakedown period, trial burn period and the period after completion of the initial trial burn, complete Table V.I.5 - Boiler and Industrial Furnace Permit Conditions, Monitoring, and Automatic Waste Feed Cutoff Systems-Short-Term Operation for each new or modified unit.
6. If a boiler or industrial furnace will manage reactive or incompatible waste, as indicated on Table V.I.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17.
7. If a boiler and industrial furnace will manage F020, F021, F022, F023, F026, and F027 waste, as indicated on Table V.I.1, the DRE requirement is 99.9999%.
8. If a trial burn for modified units and Comprehensive Performance Test under 40 CFR Part 63, Subpart EEE (HWC MACT) (for all new and modified units) will be performed, designate one or more of the 40 CFR 261 Appendix VIII organic compounds present in the wastes to be incinerated as Principal Organic Hazardous Constituents (POHCs). Selection will be based upon the degree of difficulty of incineration of these compounds and upon their concentration or mass in the waste feed. These POHCs will be used to determine the destruction

and removal efficiency (DRE) specified in the performance standards of 40 CFR 266.104 and HWC MACT. In addition, complete Table V.I.8 - Principal Organic Hazardous Constituents.

9. Submit a Quality Control/Quality Assurance Plan for all sampling, analysis, and monitoring activities.

10. As applicable, facilities with existing permits may request that the Executive Director to address permit conditions that minimize emissions from startup, shutdown, and malfunction events in accordance with the options under 40 CFR 270.235 when requesting the removal of permit conditions that are no longer applicable according to 30 TAC 305.571(b). Please provide the relevant information needed to process the requested option to minimize emissions identified in 40 CFR 270.235(1)(a)(i)-(iii). [30 TAC 305.572(a)(6)]

J. Drip Pads

Not Applicable

Provide an engineering report which includes all of the information specified in 40 CFR 264.570-573 and 270.26

1. Complete Table V.J.1. - Drip Pads and list the drip pads, covered by this application, to be permitted. List the N.O.R. unit number, the waste managed in each unit, the rated capacity of each unit, and the overall dimensions of the unit (including perimeter curb or berm height) that will be in contact with the waste.

2. For either new drip pads or existing drip pads for which the owner/operator elects to comply with the synthetic liner requirement of 40 CFR 264.573(b), please complete Table V.J.2. - Drip Pad Synthetic Liner System.

3. In the engineering report, describe the design, installation, construction, and operation of the liner and leakage collection system. The description must demonstrate that the liner system will prevent discharge to the land, groundwater, and surface water. The following analyses should be included as attachments to the engineering report (A QAPP should be included in the report to ensure that each analysis is performed appropriately):

For artificial liners:

a. Seaming method
b. Surface preparation method
c. Tensile Strength
d. Impact Resistance
e. Compatibility Demonstration
f. Foundation Design (including Settlement Potential, Bearing Capacity and Stability, and Potential for Bottom Heave Blow-out)

For Leakage Collection System

g. Capacity of the system:
   (1) rate of leachate removal
   (2) capacity of sumps
   (3) thickness of mounding and maximum hydraulic head
h. Pipe Material and Strength
i. Pipe Network Spacing and Grading

j. Collection Sump(s) Material and Strength

k. Drainage Media Specifications and Performance

l. Analyses showing that pipe and pipe perforation size will prevent clogging and allow free liquid access to the pipe.

m. Compatibility Demonstration

K. Miscellaneous Units

Not Applicable

A miscellaneous unit is a unit other than a container, tank, incinerator, boiler, industrial furnace, landfill, surface impoundment, waste pile, underground injection well, land treatment area, drip pad, or unit eligible for an R, D & D permit that is used to process, store, or dispose of hazardous waste.

For each miscellaneous unit for which an operating permit is sought, provide an engineering report which includes all of the information specified in 40 CFR 264.600-264.602, and 270.23.

1. Complete Table V.K - Miscellaneous Units and list the miscellaneous units covered by this application. List the waste managed in each unit and the rated capacity or size of the unit. If the information requested is not applicable, an explanation must be submitted.

2. Provide any other information which is descriptive of the relationship between the miscellaneous unit and the environment. Application information may include design requirements of 30 TAC 305 and 335, 40 CFR Part 264 Subparts I through O, and Part 270 that are appropriate for the miscellaneous unit or portions of the unit being permitted.

3. For a unit which involves combustion, please provide emissions data or a trial burn plan. Tables V.H.1-5 for incinerators or Tables V.I.1-5 for boilers and industrial furnaces may be adapted as appropriate to provide operation, monitoring, and emission information for a miscellaneous combustion unit.

L. Containment Buildings

Not Applicable

Complete Table V.L. - Containment Buildings and list the containment buildings covered by this application to be permitted. List the N.O.R. unit number, whether the unit is for storage and/or processing, the waste or debris managed in each unit, the rated capacity of each unit, and the overall dimensions of the unit (including containment wall height) that will be in contact with the waste or debris.

VI. Geology Report

Provide all Part B responsive information in Appendix VI. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

This portion of the application applies to owners or operators of new hazardous waste management facilities; areal and/or capacity expansions of existing hazardous waste management facilities; and existing industrial solid waste facilities that store, process or dispose of hazardous waste in surface impoundments, landfills, land treatment units, waste piles (except those waste piles that meet the requirements of Section V.E.10.b. of this application), and tanks or drip pads which require a contingent post-closure plan.

For a new Compliance Plan or modification/amendment to an existing Compliance Plan of Section XI of this application, submit a Geology Report which contains updated site geologic information derived from on-going investigations since submittal of the last Permit modification/amendment application.

Submit a Geology Report which includes at a minimum the following information. This report and all specifications, details, calculations/estimates and each original sheet of plans, drawings, maps, cross-sections, other graphics, such as limits of contamination maps, etc. or any other geoscientific work must be signed and sealed by a Professional Geoscientist licensed in the State of Texas under the Professional Geoscientists Practice Act.

The Geology Report submitted with the August 2014 Part B application is provided in Appendix VI. The subsidence section of the report has been updated with current data from the Harris-Galveston Subsidence District website, including annual groundwater reports.

A. Geology and Topography

1. Active Geologic Processes **See Appendix VI.**

Provide a description and interpretation of the active geologic processes in the vicinity of the facility. This description should include:

a. An identification of any faults (active or otherwise) in the area of the facility. The preparer should determine which Holocene sediments or man-made structures have been displaced. The report should contain a description of the investigation techniques used to identify faults and should assess the degree, if any, to which a particular fault increases the long-term potential for waste migration. The clearance required from active faults to ensure that liner systems will not be disrupted will be based upon site specific factors such as the zone of significant surface deformation, uncertainty in locating the fault, activity of the fault, and a distance to provide a reasonable margin of safety. These issues should be addressed when discussing the offset of an industrial solid waste facility unit from an active fault.

To satisfy the requirements of 30 TAC 305.50(a)(4)(D) and 305.50(a)(10)(E), for a proposed hazardous waste management facility or a modification or amendment of a permit which includes a capacity expansion of an existing hazardous waste management facility, submit the following. **Not Applicable**

(1) A geologic literature review should be conducted, from which useful information on the possibility of faulting at a given site may be revealed. This includes, but is not limited to, maps of surface faults, subsurface structure, and field investigations by the author(s).

(2) Descriptions and maps of faulting, fracturing, and lineations in the area are necessary. An aerial photo with lineation

interpretations is suggested.

(3) The maps and cross-sections are to be constructed using an amount of data necessary to adequately describe the geology of the area. Surface data, including data regarding known surface expressions, such as surface faults, gas seeps, lineations, etc., should be accounted for in the subsurface interpretations. A surface structure map should be prepared, incorporating all of the subsurface data as well as known surface features.

(4) A minimum of two structural cross-sections, utilizing available oil field and/or water well electric log data, shall be made perpendicular to each other, crossing at the proposed surface unit location. These cross-sections should define geologic units, indicating especially Holocene sediments and Underground Sources of Drinking Water (USDWs), as well as lithology. The cross-sections should be constructed from the surface, down through the shallowest major structure or the base of the Holocene, whichever is deeper. These cross-sections need to be on a scale necessary to depict the local geology (3000' radius from the site location minimum). If needed to adequately describe the local geology, then a larger radius or deeper area of review may be necessary.

(5) A minimum of two structural subsurface maps need to be prepared. One map should be made on the shallowest mappable subsurface marker, the other on a deeper horizon that shows the underlying major structure. Additional maps may be necessary.

(6) Field surveillance will be necessary to check the area of the facility for surface features, such as lineations, and to investigate potential surface faults as indicated by, but not limited to, aerial photos, topographic maps, and seismic and subsurface structural maps.

(7) The above requirements do not limit the use of any additional information, such as seismic data, isopach maps, or potentiometric maps, that may help in defining the geology of the area of review.

(8) If faulting exists within 3000 feet of the surface unit, it must be demonstrated that the fault has not had displacement within Holocene time. If such a fault does exist, it cannot pass within 200 feet of the surface unit.

(9) If a fault that has been active within the Holocene is located within 3000 feet of the surface unit, it must be demonstrated that, a.) the fault is not transmissive, i.e., it will not provide for groundwater movement that would result in endangerment to human health or the environment, and b.) there is no actual and/or potential problem of subsidence, which could endanger the stability of the surface unit.

b. A discussion of the extent of land surface subsidence in the vicinity of the facility including total recorded subsidence and past and projected rates of subsidence. For facilities located at low elevations along the coast which have experienced appreciable rates of subsidence, the potential for future submergence beneath Gulf water should be addressed. **See Appendix VI.**

c. A discussion of the degree to which the facility is subject to erosion. The potential for erosion due to surface water processes such as overland flow, channeling, gullying, and fluvial processes such as meandering streams and undercut banks should be evaluated. If the facility is located in a low-lying coastal area, historical rates of shoreline erosion should also be provided.

See Appendix VI.

d. Complete Table VI.A.1. - Major Geologic Formations **Table VI.A.1 is included in Appendix VI.**

2. **Applicable to Land Based Units Only.** Regional Physiography and Topography (applicable only to owners or operators of facilities that store, process, or dispose of hazardous waste in surface impoundments, landfills, land treatment units, waste piles, except waste piles exempt from groundwater monitoring requirements, and tanks which require a contingent post-closure plan) **See Appendix VI.**

    a. Distance and direction to nearest surface water body
    b. Slope of land surface
    c. Direction of slope
    d. Maximum elevation of facility
    e. Minimum elevation of facility

3. **Applicable to Land Based Units Only.** Regional Geology (applicable only to owners or operators of facilities that store, process, or dispose of hazardous waste in surface impoundments, landfills, land treatment units, waste piles, except waste piles exempt from groundwater monitoring requirements, and tanks which require a contingent post-closure plan) **See Appendix VI.**

    Provide a description of the regional geology of the area. This section should include:

    a. A geologic map of the region with text describing the stratigraphic and lithologic properties of the map units. An appropriate section of a published map series such as the Geologic Atlas of Texas prepared by the Bureau of Economic Geology is acceptable.

    b. A description of the generalized stratigraphic column in the facility area from the base of the lowermost aquifer capable of providing usable groundwater to the land surface. At least the uppermost 1,000 feet of section below the facility should be described. The geologic age, lithology, variation in lithology, thickness, depth, geometry, hydraulic conductivity, and depositional history of each geologic unit should be described based upon available geologic information. Regional stratigraphic cross sections should be provided, where available.

4. Subsurface Soils Investigation Report **(Applicable to land based units or units requiring contingent closure and post-closure).** See Appendix VI.

This section should contain the results of an investigation of subsurface conditions for each land based unit and/or unit which requires contingent closure and post-closure care. If several units are in close proximity, a single investigation for the area will suffice. This report should include:

a. The logs of borings performed at the waste management area. All borings must be conducted in accordance with established field exploration methods. Investigation procedures should be discussed in the report. A sufficient number of borings should be performed to establish subsurface stratigraphy and to identify and allow assessment of potential pathways for pollution migration. Borings must be sufficiently deep to allow identification of the uppermost aquifer and underlying hydraulically interconnected aquifers. Borings should penetrate through the uppermost aquifer and all deeper hydraulically interconnected aquifers, deep enough to identify the aquiclude at the lower boundary. Borings should be completed to a depth at least 30 feet below the deepest excavation planned at the waste management area.

b. A text which describes the investigator's interpretations of the subsurface stratigraphy based upon the field investigation. If appropriate, soils may be assigned to generalized strata to aid in the discussion.

c. A text which describes the investigator's interpretations of the subsurface stratigraphy based upon the field investigation. If appropriate, soils may be assigned to generalized strata to aid in the discussion.

d. Complete Table VI.A.4. - Waste Management Area Subsurface Conditions and provide in the report data which describes the geotechnical properties of the subsurface soil materials. All laboratory and field tests must be performed in accordance with recognized procedures. A brief discussion of test procedures should be included. All major strata encountered during the field investigation phase should be characterized with regard to: Unified Soil Classification, moisture content, percent less than number 200 sieve, Atterberg limits (liquid limit, plastic limit, and plasticity index), and coefficient of permeability. Field permeability tests should be used to determine the coefficient of permeability of sand or silt units and should also be used to supplement laboratory tests for more clay-rich soils. In addition, particle size distribution and relative density based upon penetration resistance should be determined for coarse-grained soils. For fine-grained soils the following parameters should also be determined: cohesive shear strength based upon either penetrometer or unconfined compression tests, dry unit weight, and degree of saturation(s). For the major soil strata encountered, the maximum, minimum, and average for each of these variables should be compiled. **Table VI.A.4 is included in Appendix VI.**

e. For land treatment units, provide a description of the surficial soils at the site which includes:

(1) The name and description of the soil series at the site;
(2) Important physical properties of the series such as depth, permeability, available water capacity, soil pH, and erosion factors;
(3) Engineering properties and classifications such as USDA texture, Unified Soil Classification, size gradation, and Atterberg limits (liquid limit, plastic limit, and plasticity index); and
(4) The cation exchange capacity (CEC) of the soil(s) expressed in units of meq/100g.

Much of this information may be obtained by consulting the county soil survey published by the United States Department of Agriculture, Soil Conservation Service. If available, a copy of an aerial photograph showing soil series units on the land treatment area should be provided.

If an aerial photograph is not available, include a soil series map as an attachment to this subsurface soils investigation report.

B. Facility Groundwater

If past monitoring has shown the presence of hazardous constituents in the groundwater, the owner or operator must submit a Compliance Plan Application with this application. The Compliance Plan Application and instructions can be found in Section XI of this application form. **Hazardous constituents have been detected in groundwater. See Section XI for the Compliance Plan renewal application.**

1. Regional Aquifers **See Appendix VI.**

Provide a description of the regional aquifers in the vicinity of the facility based upon available geologic references. The section should provide:

a. Aquifer names and their association with geologic units described in Section VI.A.3.b.;

b. A description of the constituent materials of the aquifer(s);

c. A description of the water-bearing and transmitting properties of the aquifer(s);

d. Whether the aquifers are under water table or artesian conditions;

e. Whether the aquifers are hydraulically connected;

f. A regional water table contour map or potentiometric surface map for each aquifer, if available, from published references;

g. An estimate of the rate of groundwater flow in units of ft/yr;

h. Values for total dissolved solids content of groundwater from the aquifers;

i. Identification of areas of recharge to the aquifers; and

Note: An application for a new hazardous waste surface impoundment, waste pile, land treatment unit, or landfill, which is to be located in the apparent recharge zone of a major or minor aquifer, as designated by the Texas Water Development Board, must include a hydrogeologic report documenting the potential effects, if any, on the regional aquifer in the event of a release from the waste containment system. See the publication entitled Water for Texas, Today and Tomorrow (1990) or subsequent revision (Available at **http://www.twdb.texas.gov/waterplanning/swp/1990/index.asp**) for more information [30 TAC 305.50(6)]

j. The present use of groundwater withdrawn from aquifers in the vicinity of the facility.

The preparer should update Section III.C.1.e. of the Part A permit application to ensure that all water wells within 1 mile of the property boundaries of the facility have been located. The aquifer(s) yielding water should be identified for each well.

2. Provide groundwater conditions for each land based unit or unit which requires post closure care which includes all the information specified in 30 TAC 335.156-335.167. This discussion should also include:

See Appendices VI and XI..

a. Records of water level measurements in borings. The boring logs prepared in response to Section VI.A.4.a. should be annotated to note the level at which groundwater is first encountered and the level of groundwater after equilibration. Normally a 24-hour period is adequate for equilibration of groundwater but an extended period may be required for saturated clay deposits. This information should also be presented on the cross-sections required in Section VI.A.4.b. and recorded and retained in the facility groundwater monitoring record.

b. Records of historical maximum and minimum static water level measurements in monitor wells. Historic water level measurements made during any previous groundwater monitoring should be presented in a table for each well.

c. Upper and lower limits of the uppermost aquifer and deeper aquifers which are hydraulically interconnected to it beneath the facility boundary. In most cases this identification would include surface contour maps of the top and bottom surfaces. Indicate the typical depth at which groundwater is first encountered.

d. A site specific water table contour map or potentiometric surface map for the uppermost aquifer, and the basis for such identification (the information obtained from hydrogeologic investigations of the facility area). The predicted groundwater flow direction and rate should be indicated.

e. A discussion of the variation of hydraulic gradient across the site, including vertical gradient. Calculations for the maximum, minimum, and average groundwater flow velocities for each aquifer identified should also be provided, including pump test data where appropriate.

f. An analysis of the most likely pathway(s) for pollutant migration in the event that the primary barrier liner system is penetrated.

3. Description of the Detection Monitoring Program

Not applicable. The Moat is monitored in accordance with a Compliance Monitoring Program and the Stormwater Pond and Bauxite Pond (Ponds Waste Management Area) are monitored in accordance with a Corrective Action Monitoring Program. See Section XI of this application.

It is important to note that even if the proposed program may use the same well system as the present program, the sampling parameters may be different.

a. Include in the design report a description of the proposed detection monitoring program. This description should contain all requirements of 30 TAC 335.163-335.164.

b. Provide a justification for the selected suite of waste specific parameters specified in Table VI.B.3.c. - Groundwater Sample Analysis based on toxicity, mobility, persistence, and concentrations in light and dense non-aqueous phase components of the waste.

c. (Sampling and Analysis Plan) Describe the proposed sampling and analysis methods, as well as statistical comparison procedures to be utilized in evaluating groundwater monitoring data. Note: Methods listed for use in groundwater programs may provide flexibility allowing for updates of the base method. For methods other than the standard acceptable methods, applicant must provide a demonstration that the proposed methods are appropriate for groundwater analysis per 30 TAC 335.163(5).

d. Specify the statistical method and process for determining whether constituent concentrations in groundwater are above background, in accordance with 30 TAC 335.163. Refer to the EPA guidance document entitled Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities - Unified Guidance (March 2009) (document # EPA 530-F-09-020) for recommended methods.

   All data submitted to the TCEQ shall be in a manner consistent with the latest version of the "*Quality Assurance Project Plan for Environmental Monitoring and Measurement Activities Relating to the Resource Conservation Recovery Act and Underground Injection Control*" (TCEQ QAPP) which a can be found on the agency's website.

   Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity. The method used to obtain a representative sample of the material to be analyzed shall be the appropriate method from ***Ground Water, Volume II: Methodology***, (document # EPA/625/6-90/016b) or an equivalent method approved by the Executive Director of the TCEQ. Laboratory methods shall be those specified in ***Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846***, 1987, as revised; ***Standard Methods for the Examination of Water and Wastewater, Fifteenth Edition***, 1980, and 1981 supplement, or current adopted edition; ***RCRA Ground-Water Monitoring: Draft Technical Guidance***, 1992, ***OSWER Directive 9950.1***, or an equivalent method approved in writing prior to use by the Executive Director. [30 TAC Section 305.125(11)(A)]

e. For inclusion into a permit, complete Table VI.B.3.b. - Unit Groundwater Detection Monitoring System to specify the proposed well system for each unit or waste management area which requires groundwater monitoring.

f. For inclusion into a permit, complete Table VI.B.3.c to specify:

(1) the suite of waste specific parameters (indicator parameters, waste constituents, or reaction products) which will be analyzed at each sampling event for each well or group of wells. These parameters must provide a reliable indication of the presence of hazardous constituents in the groundwater;

(2) the sampling frequencies and calendar intervals (e.g., monthly; quarterly within the second 30 days of each quarter; semiannually within the first 30 days of the 2nd and 4th quarters, etc.);

(3) the analytical method and the laboratory predicted detection limit and predicted Practical Quantification Limit (PQL) of the sample preparation and analysis methods for the selected parameters. This detection limit will represent the capability of the sampling and analysis to reliably and accurately determine the presence of the selected parameters in the sample; and

(4) the concentration limit which will be the basis for determining whether a release has occurred from the waste management unit/ area. Concentration limits shall be based on background values for the waste management unit/area, or PQL values developed through laboratory data obtained using practices consistent with the latest version of the TCEQ QAPP. If background values are lower than PQLs, the applicant may choose respective PQLs as concentration limits for hazardous constituents.

g. Submit drawings depicting the monitoring well design, current and proposed.

h. Submit at least one map of the entire facility and additional maps or drawings if necessary on one or more 8.5" x 11" sheets of sufficient scale to show the following in adequate detail:
   (1) Monitoring well locations, current and proposed;
   (2) Soil-pore liquid and core sampling points, current and proposed;
   (3) Waste management unit(s)/area;
   (4) Property boundary;
   (5) Point of compliance;
   (6) Direction of groundwater flow; and
   (7) Extent of any known plume of contamination

i. For the description of site-specific groundwater for inclusion in permit summary documents, please complete the following:

Table VI.A.2. Description of Uppermost Aquifer

C. Exemption from Groundwater Monitoring for an Entire Facility

Not Applicable

In accordance with 30 TAC 335.156(b)(4), a waste management facility may be exempt from groundwater monitoring if the owner or operator can demonstrate that there is no potential for migration of liquid from any regulated unit to the uppermost aquifer during the active life of the regulated unit (including the closure period) and post-closure care period. This demonstration must be submitted with the permit application, and must be certified by a qualified geologist or geotechnical engineer.

This exemption does not apply to Unsaturated Zone Monitoring. Owners and operators of Land Treatment Units must monitor the unsaturated zone under all circumstances.

The following areas should be addressed in the demonstration, and any predictions must be made on assumptions that maximize the rate of liquid migration:

1. Thickness of soil between the base of the unit and saturated zone;
2. Thickness of saturated zone;
3. Head pressure of the fluids;
4. Properties of the saturated and unsaturated zone (including permeability, effective porosity, and homogeneity), and
5. Total life of facility

The criteria used for the evaluation of this demonstration are more stringent than those used for evaluations of demonstrations submitted prior to permitting. Thus it is necessary for an owner or operator to submit another demonstration even if one was submitted and approved previously.

This type of exemption differs from the exemptions described in Sections V.D. (Surface Impoundments), V.E. (Waste Piles), and V.G. (Landfills). An owner or operator may pursue a facility-wide exemption as well as an exemption for a particular unit, if the owner or operator wishes.

D. Unsaturated Zone Monitoring

Not Applicable

1. List all hazardous constituents that have been or will be monitored.
   a. Current parameters.
   b. Proposed parameters.
2. Number of soil-pore liquid sampling points.
   a. Depth of sampling points.
   b. Equipment used for soil pore liquid monitoring.
3. Number of soil core sampling points.
   a. Depth of soil core sampling points.
   b. Indicate on a facility map locations of all sampling points.

VII. Closure and Post-Closure Plans

Provide all Part B responsive information in Appendix VII. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

For multiple units provide an include all Part B responsive information in a separate Appendix for each unit.

Submit a full closure plan and post-closure plan, if applicable, which contains all the information required by 30 TAC 335.8, 335.169, 335.172, 335.174, 335.177, 335.178, 335.551-335.569, 30 TAC Chapter 350, 40 CFR 264.112, 264.118, 264.178, 264.197, 264.228, 264.258, 264.280, 264.310, 264.351, 264.575, 264.601, 264.603, 264.1102, 270.14(b)(13), 270.17(f), 270.18(h), 270.20(f), 270.21(e), 270.23(a)(2) & (3), and 270.26(c)(16) where applicable. The owner of property on which an existing disposal facility is located must also submit documentation that a notation has been placed in the deed to the facility that will in perpetuity notify any potential purchasers of the property that the land has been used to manage hazardous wastes and its use is restricted (see 30 TAC 335.5). For hazardous waste disposal units that were closed before submission of the application, the applicant should submit documentation to show that plats and notices required under 40 CFR 264.116 and 264.119 have been filed.

This renewal application addresses closure of the interim closed Stormwater Pond (NOR 002) and post-closure care of the closed Moat (NOR 001) and closed Bauxite Pond (NOR 007). Copies of the deed recordation documents for the Stormwater Pond, Moat, and Bauxite Pond are provided in Appendix II.G.6.

A. Closure

This section applies to the owners and operators of all hazardous waste management facilities to be permitted. The applicant must close the facility in a manner that minimizes need for further maintenance and controls, or eliminates, to the extent necessary to protect human health and the environment, the post-closure release of hazardous waste, hazardous constituents, leachate, contaminated rainfall, or waste decomposition products to the groundwater, surface waters, or to the atmosphere.

The facility type and type of unit to be closed can determine the level of detail sufficient for a closure plan.

For each unit to be permitted, complete Table VII.A. - Unit Closure and list the facility components to be decontaminated, possible methods of decontamination, and possible methods of disposal of wastes and waste residues generated during unit closure. All ancillary components must be included in calculating closure cost estimates.

The Stormwater Pond (NOR 002) is interim closed. Table VII.A is provided in Appendix VII.A.

Additionally, if the applicant plans to close a surface impoundment in accordance with 30 TAC 335.169(a)(1) and the impoundment does not comply with the liner requirements of 30 TAC Section 335.168(a) then the closure plan for the impoundment must include both a plan for complying with 30 TAC 335.169(a)(1) and a contingent plan for complying with 30 TAC 335.169(a)(2).

The closure plan for the Stormwater Pond from the Part B application dated May 15, 2000 is included in Appendix VII.A. Conceptual plan view and cross-sectional drawings of the Stormwater Pond cap and cover are provided in Appendix VII.A.

Guidance on design of a closure cap and final cover for landfills is given in TCEQ Technical Guideline No. 3, and EPA publication 530-SW-85-014 presents guidance on construction quality assurance of liner construction.

If a waste pile does not comply with the liner requirements of 30 TAC Section 335.170(a)(1) then the closure plan for the waste pile must include both a plan for complying with 40 CFR 264.258(a) and a contingent plan for complying with 40 CFR 264.258(b).

The final certification of closure of a land treatment unit may be prepared by an independent licensed Professional Geoscientist in lieu of an independent licensed Professional Engineer. [30 TAC 335.172(b)]

B. Closure Cost Estimate (including contingent closure) [30 TAC 335.178, 40 CFR 264.142]

This section applies to owners or operators of all hazardous waste facilities, except state and federal agencies. A detailed estimate, in current dollars, of the cost of closing the facility should be included in the report. The cost estimate must include the cost of closure at the point in the facilities operating life when the extent and manner of its operation would make closure the most expensive. The TCEQ has published Technical Guideline No. 10, Closure and Post-Closure Cost Estimates, for calculating closure costs which should be consulted. Closure costs should be developed on the basis of abandonment of the site at full capacity and closure activities to be conducted by a third party with no operable on-site equipment. The costs for closing each unit must be detailed.

An updated closure cost estimate for the Stormwater Pond is provided in Appendix VII.B, Table VII.B. Closure costs are based on estimates for a third party to complete final closure at the point in the facility's active life when the extent and manner of its operation would make closure most expensive.

1. If closure costs are based on contractor bids, the applicant should submit a copy of the bid specification and each contractor's response.

2. If closure costs are based on a detailed analysis, the applicant should submit details of item costs and number of each item, and details of costs for equipment rental, third party labor and supervision, transportation, analytical costs, etc. Provide an itemized cost on Table VII.B. - Unit Closure Cost Estimate for a complete, third party permitted facility closure. 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.

3. The closure plan may propose on-site disposal of wastes, residues, etc. during closure of a unit, and this may be executed if on-site capacity exists in other units during closure of a unit. However, the cost estimate for closure must be based on off-site shipment and disposal during closure of all wastes, waste residues, wastes generated by decontamination, contaminated stormwater, and leachate.

4. For each surface impoundment, waste pile, or tank system required to have a contingent closure plan, the cost for closure under the contingent closure plan should be detailed, as well as the cost of proposed closure. The more expensive of the cost of the proposed closure of a unit versus the cost of the

contingent closure of the unit should be used in the total facility closure cost estimate.

C. Post-closure

This section applies to owners or operators of all hazardous waste disposal facilities. This section also applies to certain waste piles, tanks and surface impoundments from which the owner or operator intends to remove wastes at closure but which are required to have contingent post-closure plans. **The post-closure care plan for the Stormwater Pond, Moat, and Bauxite Pond from the Part B application dated February 2001 is included in Appendix VII.C.**

For Landfills, and Waste Piles, Surface Impoundments, and Tanks Closed as a Landfill

1. Provide as-built plans and specifications for the final cover system, individually for each unit that is sealed, signed and dated by a licensed professional engineer with current Texas registration along with the Registered Engineering Firm's name and Registration Number would satisfy this requirement; Other as-built plans and specifications for the unit may be submitted upon request.
As-built plans and specifications are provided in Appendix V.D. The Stormwater Pond was closed with 3 feet of compacted clay cap and a minimum 1 foot compacted calcium sulfate cover. The Moat was closed with a cover system consisting of 4 feet of compacted clay cap and a 1.5 foot thick protective topsoil cover with grass. The Bauxite Pond was closed with a cover system consisting of 4 feet of compacted clay cap and a 2.5 foot thick protective topsoil cover with grass.

2. Complete the following tables, as applicable:

a. Complete Table VII.G - Post Closure Period.

Table VII.G is provided in Appendix VII.

b. Complete Table V.G.1 - Landfills and list the landfills (and number of cells, if applicable) covered by this application. List the waste(s) managed in each unit and the rated capacity or size of the unit. If wastes are segregated in some manner, list the cell number in which wastes are placed next to each waste type. **Not applicable.**

c. Table V.G.3. - Landfill Liner System and specify the type of liner used for the landfill. **Not applicable.**

d. Table V.G.4. - Landfill Leachate Collection System used for the landfill. **Not applicable.**

e. Table V.E.1 - Waste Piles and list the waste piles covered by this application. List the waste managed in each unit and the rated capacity or size of the unit. **Not applicable.**

f. Table V.E. 3 - Waste Pile Liner System and specify the type of containment/liner system. **Not applicable.**

g. Table V.D.1 - Surface Impoundments and list the surface impoundments, covered by this application, to be permitted. List the waste(s) managed in each unit and the rated capacity or size of each unit. **Table V.D.1 is provided in Appendix V.D.**

h. Table V.D. 6. - Surface Impoundment Liner System for each surface impoundment to be permitted. **Table V.D.6 is provided in Appendix V.D.**

i. Table V.C. Tanks and Tank Systems. **Not applicable.**

Post-closure care of each hazardous waste management unit must continue for 30 years after the date of completing closure of the unit and must consist of monitoring and reporting of the groundwater monitoring systems in addition to the maintenance and monitoring of waste containment systems. Continuation of certain security requirements may be necessary after the date of closure. Post-closure use of property on or in which hazardous waste remains after closure must never be allowed to disrupt the integrity of the containment system. In addition, submit the following information.

1. The post-closure care plan for a landfill or of a surface impoundment, waste pile, miscellaneous unit, or tank system closed with wastes or waste constituents left in place, or closed under a contingent closure plan, must demonstrate compliance with 30 TAC 335.174(b). **See Appendix VII.C**

2. The name, address, and phone number of the person or office to contact about the disposal facility during the post-closure period; and

   Joe Ebert, HSE Manager
   Pasadena Refining System, Inc.
   111 Red Bluff Road
   Pasadena, TX 77506
   713.472.2461
   713.472.4051; press 0 and request site permit contact

3. A discussion of the future use of the land associated with each unit.

   Future land use for the Stormwater Pond, Moat, and Bauxite Pond is industrial. Industrial land use will continue to support post-closure care activities at these units.

4. For landfills, surface impoundments, waste piles, and land treatment areas closed under interim status, submit the required documentation of 40 CFR 270.14(b)(14).

   Proof of deed recordation for the Stormwater Pond, Moat, and Bauxite Pond is provided in Appendix II.G.6. Certification of Closure for the Moat and the Bauxite Pond is provided in Appendix V.D.

5. Landfills, surface impoundments, waste piles and land treatment areas that received hazardous wastes after July 26, 1982 or for which closure was certified after January 26, 1983 must be included in post-closure care plans unless they have been determined to have closed by removal equivalent to the closure standards in 40 CFR 264 Subpart G. If such a demonstration has been made pursuant to 40 CFR 270.1(c)(5), but an equivalency determination has not been made, please submit a copy of the demonstration documentation. If an equivalency determination has been made pursuant to 40 CFR 270.1(c)(6), applicant should submit a copy of the determination. Complete Table VII.C.5. - Land-Based Units Closed Under Interim Status for all land based units closed under interim status.

   Table VII.C.5 is included in Appendix VII. The post-closure care plan is provided in Appendix VII.C.

D. Post-closure Cost Estimate [40 CFR 264.144]

This section regarding post-closure cost estimate applies to owners or operators of

all hazardous waste disposal facilities, except state and federal agencies, and certain waste piles, tank systems, and surface impoundments from which the owner or operator intends to remove wastes at closure, but which are required to have contingent closure and post-closure plans. A detailed estimate, in current dollars, of the annual cost of monitoring and maintenance of the facility in accordance with the applicable post- closure regulations must be included in the report. The TCEQ has published Technical Guideline No. 10 for calculating post-closure costs, which should be consulted. Costs should be developed in detail for 30 years of post-closure care activities to be conducted by a third party, for each applicable unit.

Updated post-closure cost estimates are provided in Appendix VII.D. Because these units are monitored under a Compliance Monitoring or Corrective Action program, groundwater monitoring costs have been incorporated into Table XI.E.2 of the Compliance Plan application (Section XI). Post-closure costs are based on the estimate for a third party to complete the post-closure care plan.

1. The applicant should submit details of item costs and number of each item for off-site disposal of leachate and bailed monitor well water, labor and supervision, monitor well sampling and analyses, inspection and repair of the cap(s), mowing and re-seeding of the vegetative cover, maintaining site security, etc. Provide an itemized cost estimate on Table VII.D. - Unit Post-Closure Cost Estimate for complete, third party permitted facility post-closure care.

   Table VII.D is provided in Appendix VII.D.

2. 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.

3. Total annual cost of post-closure care for the facility including costs of contingent post-closure care should be multiplied by 30 years.

E. Closure and Post-Closure Cost Summary

Please Complete Table VII.E.1. - Permitted Unit Closure Cost Summary

Please Complete Table VII.E.2. - Permitted Unit Post-Closure Cost Summary

Tables VII.E.1 (for the Stormwater Pond) and VII.E.2 (for the Stormwater Pond, Moat, and Bauxite Pond) are included in Appendix VII.E.

VIII. Financial Assurance

Provide all Part B responsive information in Appendix VI. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

A. Financial Assurance Information Requirements for all Applicants (30 TAC Chapter 37, Subchapter P, 305.50(a)(4)(A-E), 335.152(a)(6) and 335.179)

The current Financial Assurance Mechanism for the site (Corporate Guarantee for closure, post-closure, corrective action, and liability) is provided in Appendix VIII.A.

1. Financial Assurance for Closure

   An owner or operator must establish financial assurance for the closure of the facility no later than 60 days prior to the first receipt of waste [30 TAC Section 37.31(a)]. Please refer to 30 TAC Chapter 37, Subchapter P, for the financial assurance requirements for closure and provide a signed statement from an authorized signatory per 30 TAC 305.44 regarding how the owner or operator will comply with this provision.

   If a financial mechanism has been obtained, provide a copy of the mechanism.

   For applications involving a permit transfer, the new owner or operator must provide a financial assurance mechanism (in original form) satisfactory to the TCEQ executive director. Prior to the executive director issuing the permit modification transferring the permit, the new owner or operator must provide proof of financial assurance in compliance with 30 TAC Section 305.64 (g) and Chapter 37, Subchapter P.

2. Financial Assurance for Post-Closure Care (applicable to disposal facilities and contingent post-closure care facilities only)

   An owner or operator subject to post-closure monitoring or maintenance requirements must establish financial assurance for the post-closure care of the facility no later than 60 days prior to the first receipt of waste [30 TAC Section 37.31(a)]. Please refer to 30 TAC Chapter 37, Subchapter P for the financial assurance requirements for post-closure and provide a signed statement from an authorized signatory per 30 TAC 305.44 regarding how the owner or operator will comply with this provision.

   If a financial mechanism has been obtained, provide a copy of the mechanism.

   For applications involving a permit transfer, the new owner or operator must provide a financial assurance mechanism (in original form) satisfactory to the TCEQ executive director. Prior to the executive director issuing the permit modification transferring the permit, the new owner or operator must provide proof of financial assurance in compliance with 30 TAC Section 305.64 (g) and Chapter 37, Subchapter P.

3. Financial Assurance for Corrective Action

   An owner or operator must establish financial assurance for corrective action of the facility no later than 60 days after the permit or order requiring the corrective action financial assurance is signed by the executive director or commission [30 TAC Section 37.31(b)]. Please refer to 30 TAC Chapter 37, Subchapter P, for the financial assurance requirements for closure and provide a signed statement from an authorized signatory per 30 TAC 305.44 regarding how the owner or operator will comply with this provision and indicate below the type of financial assurance mechanism to cover corrective action for the

facility.

If a financial mechanism has been obtained, provide a copy of the mechanism.

For applications involving permit transfers, the new owner or operator must provide a financial assurance mechanism (in original form) satisfactory to the TCEQ executive director. Prior to the executive director issuing the permit modification transferring the permit, the new owner or operator must provide proof of financial assurance in compliance with 30 TAC Section 305.64 (g) and Chapter 37, Subchapter P.

4. Liability Requirements (not required for post-closure care)

All owners or operators must establish financial assurance for third party sudden liability coverage of the facility no later than 60 days prior to the first receipt of waste [30 TAC Section 37.31(a)]. Owners or operators of disposal facilities must establish financial assurance for third party sudden and nonsudden liability coverage of the facility no later than 60 days prior to the first receipt of hazardous waste. Please refer to 30 TAC Chapter 37, Subchapter P, for the financial assurance requirements for liability coverage, and provide a signed statement from an authorized signatory per 30 TAC 305.44 regarding how the owner or operator will comply with this provision.

If a financial mechanism has been obtained, provide a copy of the mechanism.

For applications involving a permit transfer, the new owner or operator must provide a financial assurance mechanism (in original form) satisfactory to the TCEQ executive director. Prior to the executive director issuing the permit modification transferring the permit, the new owner or operator must provide proof of financial assurance in compliance with 30 TAC Section 305.64 (g) and Chapter 37, Subchapter P.

B. Applicant Financial Disclosure Statements for a new permit, permit amendment, or permit modification, or permit renewal (30 TAC 305.50(a)(4))

Refer to the Supplemental Technical Information Guidance for Applicants Subject to Financial Capability Requirements, included in Section VIII.B., and the requirements listed below as you complete this section.

1. Provide information required in 30 TAC 305.50(a)(4), as applicable to the application request. **Not applicable. This is not an application for a permit, permit amendment, or permit modification to store, process, or dispose of hazardous waste.**

2. Complete Table VIII.B. if requesting capacity expansion or new construction. **Not Applicable**

3. For new commercial hazardous waste management facility applications, a written statement signed by an authorized signatory per 30 TAC 305.44 explaining how the applicant intends to provide emergency response financial assurance per 30 TAC 305.50(a)(12)(C) or (D). **Not applicable. This is not an application for a new commercial hazardous waste management facility.**

4. For renewal applications with no capacity expansion, please complete and submit the attached Financial Disclosure Letter. **The financial disclosure letter is provided in Appendix VIII.B.**

Information for Applicants Subject to Financial Capability Requirements

Certain applications involving Hazardous Waste facilities are subject to review of the

applicant's financial ability to construct, operate, and/or close the facility, perform post-closure care and corrective action at the facility in accordance with State law as specified in Section 361.085 of the Texas Health and Safety Code. TCEQ refers to these reviews as financial capability reviews. This document summarizes and clarifies the information required in an application to meet the TCEQ requirements of 30 Texas Administrative Code (TAC) 305.50.

Information requirements vary depending on the type of financial information available to applicants, primarily whether audited financial statements are available as well as the type of application submitted. For each scenario described below, financial information must be provided for the specific applicant.

I. New Facilities, Facility Expansions and Permit Transfers Not Applicable

A. Publicly traded Entities

1. Securities and Exchange Commission (SEC) Form 10-Ks

   This portion of the requirement calls for the two most recent 10-K reports filed.

2. SEC Form 10-Q

   This portion of the requirement calls for a copy of the most recent quarterly report.

3. Explanation statement

   This portion of the requirement calls for a statement signed by an authorized signatory [as described in 30 TAC 305.44(a)] explaining in detail how the applicant demonstrates sufficient financial resources to construct, safely operate, properly close, perform post-closure care, perform corrective action and provide adequate liability coverage for the facility. This statement must also address how the closure, post-closure, corrective action, and liability coverage financial assurance requirements of Chapter 37, Subchapter P will be met. (ie. which financial assurance mechanism is or will be used).

4. Construction capital cost estimates

   This portion of the requirement calls for estimates of capital costs for expansion and/or initial construction if the application encompasses facility expansion, capacity expansion, or new construction.

B. Privately held entities with audited financial statements

1. Audited financial statements

   This portion of the requirement calls for complete copies of the audited financial statements for each of the most recent two fiscal years. If an audit has not been completed for one of the previous two years, a complete copy of the fiscal year end financial statement and federal tax return may be substituted in lieu of the audit not performed. The tax return must be certified by original signature of an authorized signatory as being a "true and correct copy of the return filed with the Internal Revenue Service." Financial statements must be prepared consistent with generally accepted accounting principles and include a balance sheet, income statement, cash flow statement, notes to the financial statement, and an accountant's opinion letter.

2. Quarterly financial statement

   This portion of the requirement calls for a complete copy of the most current quarterly financial statement prepared consistent with generally accepted accounting principles. Internally prepared statements are satisfactory.

3. Supplementary information statement

   This portion of the requirement calls for a written statement detailing the information that would normally be found in SEC's Form 10-K including descriptions of the business and its operations; identification of any affiliated relationships; credit agreements and terms; any legal proceedings involving the applicant; contingent liabilities; and significant accounting policies.

4. Construction capital cost estimates

   This portion of the requirement calls for estimates of capital costs for expansion and/or initial construction if the application encompasses facility expansion, capacity expansion, or new construction.

5. Explanation statement

   This portion of the requirement calls for a statement signed by an authorized signatory [as described in 30 TAC 305.44(a)] explaining in detail how the applicant demonstrates sufficient financial resources to construct, safely operate, properly close, perform post-closure care, perform corrective action and provide adequate liability coverage for the facility. This statement must also address how the closure, post-closure, corrective action, and liability coverage financial assurance requirements of Chapter 37, Subchapter P will be met (ie. which financial assurance mechanism is or will be used).

C. Entities without audited financial statements or entities choosing not to provide the information listed above

1. Financial Plan

   This portion of the requirement calls for a financial plan (including balance sheets listing assets, liabilities and capital accounts) sufficiently detailed to clearly demonstrate that the applicant will be in a position to readily secure financing for construction, operation, and closure, post-closure, and corrective action if the permit is issued. At least 3 balance sheets should be included as of: a) approximately the date of the permit application, b) 12 months after any construction is completed (or assumption of operational control for a permit transfer), and c) 24 months after any construction is completed (or assumption of operational control for a permit transfer).

2. Letters of opinion

   The submitted financial plan must be accompanied by original letters of opinion from two financial experts, not otherwise employed by the applicant, who have the demonstrated ability to either finance the facility or place the required financing. If the permit action sought involves construction of a new facility or expansion of an existing facility, the opinion letters must certify that financing is obtainable within 180 days of permit approval and include the time schedule contingent upon permit finality for securing the financing as well as certify the financial plan is reasonable. Even if the application does not involve a facility or capacity expansion, the opinion letters must certify that the financial plan is reasonable. Only one opinion letter from a financial expert, not otherwise employed by the applicant, is required if the letter renders a firm commitment to provide all the necessary financing.

   Letters of opinion are usually issued by investment or commercial bankers but there could be additional sources. Applicants are encouraged to verify the adequacy of the credentials of their chosen financial expert with TCEQ's financial assurance unit prior to a formal engagement. Financial experts should describe their qualifications and disclose their independence from the applicant and/or any entity or person affiliated with the applicant.

3. Operating and cash flow statement

   This portion of the requirement calls for a written detail of the annual operating costs of the facility and a projected cash flow statement including the period of construction and first two years of operation. The cash flow statement must demonstrate the financial resources to meet operating costs, debt service, and provide financial assurance for closure, post-closure care, and liability coverage requirements. A list of the assumptions made to forecast cash flow must also be provided.

4. Explanation statement

   This portion of the requirement calls for a statement addressing how the closure, post-closure, corrective action, and liability coverage financial assurance requirements of Chapter 37, Subchapter P will be met (ie. which financial assurance mechanism is or will be used).

5. Construction capital cost estimates

   This portion of the requirement calls for estimates of capital costs for expansion and/or initial construction if the application encompasses facility expansion, capacity expansion, or new construction.

D. Entities with a resolution from a governing body approving or agreeing to approve the issuance of bonds to satisfy financial assurance requirements (e.g. a city or county)

1. Explanation statement

   This portion of the requirement calls for a statement signed by an authorized signatory [as described in 30 TAC30 305.44(a)] explaining in detail how the applicant demonstrates sufficient financial resources to construct, safely operate, properly close, perform post-closure, perform corrective action and provide adequate liability coverage for the facility. This statement must also address how the closure, post-closure, corrective action, and liability coverage

financial assurance requirements of Chapter 37, Subchapter P will be met (ie. which financial assurance mechanism is or will be used).

2. Certified copy of the resolution from the governing body.

3. Certification by the governing body of passage of the resolution.

II. Permit Renewals

Complete the **Financial Disclosure Letter** letter with applicable information inserted into the parentheses. *Note that additional information must be provided if requested by TCEQ.*

The financial disclosure letter is provided in Appendix VIII.B.

IX. Releases from Solid Waste Units and Corrective Action

Provide all Part B responsive information in Appendix IX. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

The Texas Solid Waste Disposal Act, 30 TAC 335.167, 40 CFR 270.14(d) and Section 3004(u) of the Hazardous and Solid Waste Amendments of 1984 (HSWA) *require that each hazardous waste management permit application review shall address corrective action for all releases of hazardous waste and hazardous constituents* listed in 40 CFR 261, Appendix VIII, 40 CFR Part 264, Appendix IX, and/or other constituents of concern from any solid waste management unit (SWMU) and/ or Areas of Concern (AOCs) at a facility, regardless of the time at which waste was placed in such unit[2]. For the purposes of HSWA Corrective Action, a SWMU may include, but is not limited to, any landfill, surface impoundment, land treatment unit, waste pile, underground injection well, incinerator, boiler, industrial furnace, tank, container storage area, drip pad, containment building, miscellaneous unit; any units exempt from hazardous waste permitting requirements, such as wastewater treatment units, elementary neutralization units, totally enclosed treatment units, waste recycle/reuse units, and 90-day accumulation time units; or process units or areas which may have routine and/or systematic releases to the environment (e.g., process drainage ditches or product storage tanks). Current EPA interpretation of this requirement has resulted in a Corrective Action process that begins with a RCRA Facility Assessment (RFA) to determine if corrective action is necessary.

[2]For the purposes of HSWA Corrective Action, a SWMU may include, but is not limited to, any landfill, surface impoundment, land treatment unit, waste pile, underground injection well, incinerator, boiler, industrial furnace, tank, container storage area, drip pad, containment building, miscellaneous unit; any units exempt from hazardous waste permitting requirements, such as wastewater treatment units, elementary neutralization units, totally enclosed treatment units, waste recycle/reuse units, and 90-day accumulation time units; or process units or areas which may have routine and/or systematic releases to the environment (e.g., process drainage ditches or product storage tanks).

The first step in the RFA is the development of a Preliminary Review (PR) from all available documentation for a facility (including but not limited to all facility documents, Part A, and Part B of the permit application, TCEQ correspondence files and inspection reports, etc.). The PR compiles available information on every SWMU and/or AOC that has ever existed at the facility. A unit checklist is completed for each SWMU and/ or AOC. On a unit-by-unit basis, the PR may recommend no further action for:

- well-designed and well-managed units
- units that have not managed hazardous wastes or wastes containing hazardous constituents;
- units already under corrective action by enforcement order; or
- units scheduled to be addressed in a compliance plan.

In addition, the unit checklists are summarized in a *Facility Checklist*. If there is a known release or potential for a release of hazardous waste or hazardous constituents from a unit/area, the PR may recommend a *RCRA Facility Investigation* (RFI), or an *Affected Property Assessment* (APA), if 30 TAC Chapter 350, Texas Risk Reduction Program (TRRP) applies, to determine the extent of the release for future corrective action, or stabilization as an appropriate and immediate corrective action.

The second step is a *Visual Site Inspection* (VSI) of the entire facility. The RFA is the combination of the PR and VSI documentation and any sample results. The RFA process should be scheduled so as to be completed during the latter stages of the Technical Review process or no later than one month in advance of the preparation of an initial draft permit for the facility. The RFA includes recommendations for whether further investigation or corrective action is warranted.

The requirements for an RFI or any other corrective action will be included in the permit, in the associated compliance plan which is mandatory for facilities with known groundwater contamination, or pursuant to 40 CFR 270.14(d)(3), the applicant may be required to start the RFI or other corrective action before the permit is issued. The RFI shall comply with all the applicable items contained in the U.S. EPA publication EPA/520-R-94-004, OSWER Directive 9902.3-2A, RCRA Corrective Action Plan (Final), May 1994, unless an alternate investigation approach is approved by the Executive Director. An RFI workplan may typically include a soil boring program, installation of monitoring wells, and sampling and analysis for 40 CFR 261 Appendix VIII and 40 CFR 264 Appendix IX hazardous constituents for surface soils, subsurface strata, surface water, groundwater, and/or air.

The permittee shall perform the RFI or APA and report the results. Corrective Action under 30 TAC Chapter 350 consists of an APA, determination of protective concentration levels, selection of a remedy standard (if necessary), development and implementation of a response action (if necessary), and submittal of required report according to 30 TAC Chapter 350.

If the RFI report indicates releases of hazardous waste or hazardous constituents for SWMUs and/or AOCs that have been grandfathered under 30 TAC Chapter 335 Subchapters A and S, Corrective Action shall consists of, if necessary, Interim Corrective Measures, *Baseline Risk Assessment* (BLRA)/*Corrective Measures Study* (CMS) Report, and *Corrective Measures Implementation* (CMI).

For grandfathered SWMUs and/or AOCs, the permittee may continue to complete the Corrective Action requirements under 30 TAC Chapter 335, Subchapter A and S, provided the permittee complies with the notification and schedule requirements pursuant to 30 TAC 335.8 and 350.(2)(m).

This report shall evaluate the risk, identify and evaluate corrective measure alternatives, and recommend appropriate corrective measure(s) to protect human health and the environment. The BLRA/CMS Report shall address all of the applicable items in 30 TAC 350, 30 TAC 335 Subchapter S, and the U.S. EPA publication EPA/520-R-94-004, OSWER Directive 9902.3-2A, RCRA Corrective Action Plan (Final), May 1994.

Upon approval of the BLRA/CMS Report by the TCEQ, the permittee shall submit a CMI Workplan to address all of the items for CMI Workplan contained in the U.S. EPA publication EPA/520-R-94-004, OSWER Directive 9902.3-2A, RCRA Corrective Action Plan (Final), May 1994. For projects conducted under TRRP, the risk assessment process shall be addressed in the *Affected Property Assessment Report* (APAR), and the evaluation of corrective measures shall be

conducted as part of the remedy standard selection process provided in the *Response Action Plan* (RAP). If the CMI or RAP does not propose a permanent remedy, then a CMI Workplan or RAP shall be submitted as part of a new compliance plan application or as a modification/ amendment application to an existing compliance plan. The workplan or RAP shall contain detailed final engineering design, monitoring plans, and schedules necessary to implement the selected remedy. Implementation of the corrective measures shall be addressed through a new and/or a modified/amended compliance plan. Upon installation of a corrective action system based upon the approved CMI Workplan or RAP, the permittee shall submit a CMI Report or RAP which includes as-built drawings of the corrective action system. To report the progress of the corrective measures, the permittee shall submit periodic CMI Progress Reports or Response Action Effectiveness Reports to the TCEQ in accordance with the schedule specified in the compliance plan. Upon completion of the corrective action requirements, the permittee shall submit CMI Report or Response Action Completion Reports for review and approval.

Please note that the applicant/permittee may perform voluntary corrective action, stabilization, or "interim measures" at any time prior to or during the RFA/RFI/CMS/CMI or the APAR/RAP process without prior TCEQ approval. The TCEQ strongly supports these actions when undertaken to mitigate releases or reduce or minimize exposure and releases to human health and the environment.

A. Preliminary Review Checklists

For Applications for a New Hazardous Waste Permit:

- For all facility Solid Waste Management Units (SWMUs) and/or Areas of Concern (AOCs), complete the accompanying forms entitled "Preliminary Review Facility Checklist" and "Preliminary Review Unit Checklist". Make additional copies as necessary.

For Applications for a Renewal/Amendment/Modification of an Existing Hazardous Waste Permit:

- Update the Preliminary Review Facility Checklist to include any newly identified SWMUs and/or AOCs that were not incorporated into the previous permit issuance (new, amendment, modification, or renewal), and to update the status of all previously identified SWMUs or AOCs which are incorporated into the existing permit under either Section IX - Corrective Action for Solid Waste Management Units, or Section XI - Compliance Plan. Status updates should include notes regarding whether the SWMU or AOC has been incorporated into a compliance plan, has received approval of no further action (NFA), has had changes in its corrective action status, or has had other determinations issued by the TCEQ. Include the date of the status change in the updated checklist;
- Complete the Preliminary Review Unit Checklists for any newly identified SWMUs or AOCs that were not incorporated into the previous permit issuance (new, amendment, modification, or renewal);
- Update the status on the Preliminary Review Unit Checklists for all previously identified SWMUs or AOCs that had not yet received TCEQ approval of NFA at the time of the previous permit issuance;
- Provide copies of the letters from the TCEQ approving NFA or other determinations that were issued since the previous permit issuance;
- For previously identified SWMUs and/or AOCs which are incorporated into the existing permit and are included in Section XI - Compliance Plan of this application, you may forego filling out the Preliminary Review Unit Checklists for these units. Briefly note on the Preliminary Review Facility Checklist that the SWMUs or AOCs are addressed in

Section XI. Provide the location where the SWMU's and addressed in Section XI. ; or

- If all previously identified SWMUs and/or AOCs reached NFA status at or before the last permit issuance you may forego filling out the Preliminary Review Unit Checklists, indicate Not Applicable, and provide a brief explanation of the facts.

The updated Preliminary Review Facility Checklist and Preliminary Review Unit Checklists are provided in Appendix IX, including new SWMUs and AOCs identified in permit modifications submitted in June 2023 and May 2024 as summarized in this section. Status updates for all previously identified SWMUs or AOCs which are incorporated into the existing permit under either Section IX - Corrective Action for Solid Waste Management Units, or Section XI - Compliance Plan are included in the Preliminary Review Facility Checklist. Previously identified SWMUs and/or AOCs which are incorporated into the existing permit and are included in Section XI - Compliance Plan are not included in the Preliminary Review Unit Checklists, as they are addressed in Section XI.

The June 2023 modification adding Red Bluff Tank Farm (RBTF) to the facility boundary identified four units as having a release or potential release of hazardous waste, hazardous constituents, or other constituents of concern: SWMU 12 (Refinery: Tanks 203 and 204), SWMU 13 (Refinery: Tank 97), SWMU 14 (RBTF: Tank 830), and SWMU 15 (Refinery: Tank 307). TCEQ approved the modification on December 14, 2023. Subsequently, a RCRA Facility Assessment (RFA) was submitted for the RBTF in April 2024. The RFA identified one additional SWMU and four AOCs at RBTF. The units identified in the RBTF RFA have been added to the Preliminary Review Facility Checklist and the Preliminary Review Unit Checklists in Appendix IX and to CP Table II of the Compliance Plan. SWMU and AOC numbers were assigned to these units in the RFA; however, these assignments were superseded by the May 2024 permit modification request. The SWMU and AOC numbers have been corrected in the Preliminary Review Checklists, and CP Table II, and associated figures.

The May 2024 modification adding the West and South properties to the facility boundary identified seven units as having a release or potential release of hazardous waste, hazardous constituents, or other constituents of concern: SWMU 16 (WP:PP024/PM019); SWMU 17 (WP: PP027); SWMU 18 (WP: PP002/PM024); SWMU 19 (WP:PP017); SWMU 20 (WP: PP026/PM020); AOC 21 (West Property Groundwater); and SWMU 22 (WP: PP014). These units were included in the Preliminary Review Facility Checklist and Preliminary Review Unit Checklists submitted with the modification request, which were considered "Draft" due to pending NOR updates. The NOR updates have been completed and are reflected in the Checklists presented with this application. TCEQ expects to approve this modification by October 14, 2024.

RFAs were submitted for the West Property and South Property during the first week of October 2024. Several new AOCs were identified and have been added to the Preliminary Review Facility Checklist and the Preliminary Review Unit Checklists in Appendix IX and to CP Table II of the Compliance Plan.

Complete Preliminary Review Facility Checklist (located in attachments)

Instructions for Preliminary Review Unit Checklist

Preliminary Review Facility Checklist

Preliminary Review Unit Checklist

X. Air Emission Standards

Provide all Part B responsive information in Appendix X. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

Section X.D. applies to Permittees with "one- stop" permits applying for an amendment, modification, or renewal of the Air Permits Division portions of their combined "one-stop" permit.

A. Process Vents

Does the facility have process vents and equipment subject to the requirements of 40 CFR Part 264, Subpart AA? **No; this facility does not have any process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations that manage hazardous wastes. Therefore, this section is not applicable.**

If Yes: please provide a report that includes all of the information required by 40 CFR §270.24. Indicate on a facility plot plan the approximate location of process vents.

1. For incorporation into the permit, complete Table X.A - Process Vents for all vents on waste management units that manage hazardous waste with an annual average total organics concentration of 10 ppmw or greater ("process vents"). Specifically include:

   a. process vents on distillation, fractionation, thin-film evaporation, solvent extraction, air or steam stripping operations, and vents on condensers serving these operations; and

   b. process vents on tanks (e.g., distillate receivers, bottom receivers, surge control tanks, separator tanks, and hot wells) associated with distillation, fractionation, thin-film evaporation, solvent extraction, and air or steam stripping processes if emissions from these process operations are vented through the tanks.
   Emissions caused by natural means such as daily temperature changes or by tank loading and unloading are not subject to control.

2. For process vents, include the following certification as part of the air emissions report:

   I,_____*[owner or operator]*___, certify that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is or would be 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.

   OR

   I further certify that the total organic emission limits of 40 CFR §264.1032(a) for affected process vents at the facility can be attained by a control device involving vapor recovery at an efficiency less than 95 weight percent.

   [Signature] _____ *[Date]* _____.

B. Equipment Leaks

Does the facility have equipment subject to the requirements of 40 CFR Part 264, Subpart BB? **No; therefore, this section is not applicable.**

If No: please provide the regulatory exclusion/exemption(s): **The exempt from permitting 90-day storage area does not contain any equipment subject to this subpart: valve, pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, or flange or other connector.**

Where applicable, permit exempt units, including tanks, are covered under the site air permits.

If Yes: please provide a report that includes all of the information required by 40 CFR §270.25.

1. For incorporation into the permit, complete Table X.B. - Equipment Leaks for all valves, pumps, compressors, pressure relief devices, sampling connection systems, and open-ended valves or lines that contain or contacts hazardous waste streams with organic concentrations of 10% by weight or greater. Equipment in vacuum service is not subject to control if identified in the facility operating record.

2. For equipment, include the following statement as part of the air emissions report:

   I, *[owner or operator]*, 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.

   [Signature] _____ *[Date]* _____.

C. Tanks, Surface Impoundments, and Containers

Does the facility have tanks subject to the requirements of 40 CFR Part 264, Subpart CC?

☐ Yes ☐ No X Not Applicable (no permitted tanks)

If No: provide the regulatory exception/exemption(s) for each tank subject to regulation under 40 CFR Part 264, Subpart J:

Does the facility have surface impoundments subject to the requirements of 40 CFR Part 264, Subpart CC?

☐ Yes ☐ No X Not Applicable (no permitted surface impoundments)

If No: provide the regulatory exception/exemption(s) for each permitted surface impoundment subject to regulation under 40 CFR Part 264, Subpart K:

Does the facility have containers subject to the requirements of 40 CFR Part 264, Subpart CC?

☐ Yes ☐ No X Not Applicable (no permitted container storage areas)

If No: provide the regulatory exception/exemption(s) applicable to the authorized containers subject to regulation under 40 CFR Part 264, Subpart I:

If the facility contains tanks, surface impoundments, and containers subject to the requirements of 40 CFR Part 264 Subpart CC, please provide a report that includes all of the information required by 40 CFR §270.27. **Not applicable**

1. For incorporation into the permit, complete Table X.C.

2. As applicable, include the following floating roof cover certification as part of the air emissions report for tanks:

   I, *[owner or operator]*, certify that the floating roof cover meets the applicable design specifications as listed in 40 CFR §264.1084(e)(1) or 40 CFR §264.1084(f)(1).

   [Signature] _____ *[Date]* _____.

3. As applicable, include the following floating membrane cover certification as part of the air emissions report for surface impoundments:

   I, *[owner or operator]*, certify that the floating membrane cover meets the applicable design specifications listed in 40 CFR §264.1085(c)(1).

   [Signature] _____ *[Date]* _____.

4. As applicable, include the following container certification as part of the air emissions report for containers:

   I, *[owner or operator]*, certify that the requirements of 40 CFR Part §264, Subpart CC, are met for all containers subject to control.

   [Signature] _____ *[Date]* _____.

5. As applicable, include the following control device certification as part of the air emissions report:

   I, *[owner or operator]*, 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.

   [Signature] _____ *[Date]* _____.

D. "One-Stop" Permits:

Does the facility have a "one-stop" permit?

☐ Yes X No

If yes: does this permit application propose to delete the "one-stop" portion of the permit?

☐ Yes ☐ No

Does the facility want the application processed in accordance with 30 TAC Chapter 33

- Consolidated Permit Applications?

☐ Yes ☒ No

If yes: please provide a copy of the notification of intent required by 30 TAC 33.43.

Permittees having "one-stop" permits may elect to combine the air and waste management amendment, modification, or renewal of permitted waste management units. The combined amendment, modification, or renewal application will follow the application processing procedures for an industrial solid waste permit. "One-Stop" permit applications shall include the following air quality information, as applicable.

1. Area map (to scale) showing the location of the plant and land use in the vicinity of the facility including buildings, schools, residences, etc. within 3000 feet.
2. Plot plan (to scale) with latitude and longitude showing the plant layout, property boundary and location of all emission points of air contaminants. Emission points are to be numbered.
3. Specific chemical name of each air contaminant and emission rate in maximum pounds per hour, maximum tons per year and calculations used to determine emission rates. Fugitive emissions are to be included. Complete Table 1(a) entitled "Emission Sources."
4. Process description, operating schedule, and flow chart in sufficient detail that will explain the process and operation and a material balance for processes where applicable. The description should include a discussion of disposal methods for any generated residues and associated air emissions.
5. Design specifications about each emission control device using the appropriate OAQ table.
6. Volatile organic compound (VOC) concentrations in water or sludges or soil and volumes or weights of water, sludges or soils to be processed.
7. Exhaust stack or emission point parameters for each emission point including height, diameter, temperature, velocity and flow rate, except ground level fugitive emissions.
8. Best available control technology (BACT) documentation for all new and modified facilities.
9. Documentation of compliance with any applicable Federal New Source Performance Standard (NSPS) and Federal National Emission Standard for Hazardous Air Pollutants (NESHAPS).
10. Documentation as to whether a permit is required under new source review requirements of part C or D or Title I of the Federal Clean Air Act, 42 U.S.C. 7401 et seq., for a major source or major modification.
11. Information that demonstrates reliability of emission control systems including process instrumentation, equipment redundancy and operating procedures.
12. Results of atmospheric dispersion modeling certified to have been conducted in accordance with applicable TCEQ Office of Air Quality (OAQ) procedures. Model results must show maximum off-property 30-minute and annual ground level concentrations of each air contaminant. Dispersion modeling results must indicate compliance with all OAQ Rules and Regulations. Dimensions of buildings/structures that may influence dispersion modeling are to be

furnished. Please consult with OAQ before beginning any modeling study.

13. Storage tank data including capacity in gallons, diameter, height, paint color, composition, density, vapor pressure and molecular weight of liquid stored, maximum hourly and annual throughput and number of turnovers per year. Complete Table 7 entitled "Storage Tank Summary" for each tank.

14. A statement addressing the applicability of each OAQ regulation.

15. All methods of calculating emissions must be properly referenced with justification for selecting and assuming the values used in any equation.

XI. Compliance Plan

Provide all Part B responsive information in Appendix XI. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

Groundwater Monitoring and Corrective Action Requirements for Regulated Units

Owners or operators of facilities that process, store, or dispose of hazardous waste may be required to establish groundwater monitoring and response programs in accordance with the provisions of 30 TAC 335.157. There are three types of groundwater monitoring programs which may be addressed in a Compliance Plan Application for Regulated Units: i) detection monitoring, ii) compliance monitoring, and iii) corrective action monitoring. The applicability of these various monitoring programs and the associated application requirements are illustrated in Figure 2 of the Compliance Plan Application instructions and further outlined below. A Compliance Plan Application will be required to be submitted when establishing a new compliance plan or incorporating changes in an existing compliance plan.

Detection Monitoring: An owner/operator required to conduct detection monitoring per the requirements of 30 TAC 335.164 must monitor for indicator parameters, such as specific conductance, total organic carbon, and total organic halogen, as well as chemical parameters and hazardous constituents specified in the facility permit. If a statistically significant increase in any parameter or hazardous constituent specified in the facility permit is detected in any monitoring well down gradient of the compliance point, the owner/operator must sample the groundwater in all monitoring wells and analyze the samples for the presence of 40 CFR Part 264 Appendix IX hazardous constituents. As shown in the accompanying Flow Diagram (see Figure 2), if the analytical results confirm the presence of Appendix IX constituents down gradient of the compliance point, the owner/operator must submit a Compliance Plan Application to establish a compliance monitoring program or corrective action program.

Compliance Monitoring: The requirements for compliance monitoring programs are detailed in 30 TAC 335.165. Owners/operators required to establish a compliance monitoring program must monitor the groundwater to determine whether Regulated Units are in compliance with the Groundwater Protection Standard (GWPS) specified in the compliance plan (see 30 TAC 335.158 .160). If a statistically significant increase above the GWPS in any chemical parameter or hazardous constituent specified in the compliance plan is confirmed, the owner/operator must submit a application to modify the compliance plan to establish a corrective action program in accordance with 30 TAC 335.166 (see Figure 2). If no such exceedance of the GWPS is detected for three consecutive years and the applicable compliance period has expired, the owner/operator must apply for modification of the compliance plan to re-establish a detection monitoring program for the unit. No further monitoring may be needed if the applicable post-closure care period for the unit is complete.

Regulated Unit Corrective Action Program: Owners/operators required to implement a corrective action program in accordance with the provisions of 30 TAC 335.166 must remove the hazardous waste constituents found in the groundwater or treat the groundwater in-place to levels equal to or less than the GWPS down gradient of the compliance point. The owner/ operator must also establish and implement a groundwater monitoring program to demonstrate the effectiveness of the corrective action program. Corrective action measures may be terminated once the concentrations of hazardous constituents are reduced to levels equal to or below their respective concentration limits. After termination of the corrective action measures, the owner/operator must submit an application for modification of the compliance plan to re-establish a compliance monitoring program for the duration of the

compliance period (see Figure 2).

Groundwater Corrective Action Requirements for Solid Waste Management Units (SWMUs)

HSWA Solid Waste Management Unit (SWMU) Corrective Action Program: An owner/operator of a Permitted facility or an applicant applying for a hazardous waste permit is required to submit a Compliance Plan Application if hazardous constituents have been released from a SWMU and/or Area of Concern (AOC) to the groundwater and exceeds background or Practical Quantitation Limit (PQL) values, if under Risk Reduction Rules 30 TAC 335 and/or appropriate Protective Concentration Limits (PCLs), if under Texas Risk Reduction Program Rules 30 TAC 350. The Permitted facility must implement a corrective action program for SWMUs and/or AOCs in accordance with provisions 30 TAC 335.167 (see Figure 3, page 122 of the instructions for example of process-alternate, but equivalent process may be authorized by the Executive Director).

Compliance Plan Application Form Structure:

The Compliance Plan Application consists of Sections XI.A. through E.

Application Information Form:

This section contains detailed information necessary for the application and regulatory requirements needed to put in the final compliance plan.

The application form contains the following subsections:

A. Site Specific Information

B. Groundwater Protection Standard (GWPS)

C. Compliance Monitoring Program

D. Corrective Action Program

E. Cost Estimates for Financial Assurance

1. Table XI.E.1 Corrective Action Program Cost Estimate
2. Table XI.E.2.e Groundwater Monitoring Cost Estimate
3. Table XI.E.3. Financial Assurance Summary

CP Attachments:

A. Maps

B. Well Design and Construction Specifications

C. Sampling and Analysis Plan

Compliance Plan Site Specific Tables:

This section includes the following tables which are to be completed by the applicant, as applicable, and shall be incorporated as part of the final draft Compliance Plan. [Note: include a CD disk or the USB with the application providing an electronic copy of the files supporting the compliance plan tables. **Tables should be converted to the PDF format when submitting the application**:

CP Table I - Waste Management Units and/or Areas Subject to Groundwater Corrective Action and Compliance Monitoring

CP Table II - Solid Waste Management Units and/or Areas of Concern for which Corrective Action applies pursuant to 30 TAC 335.167.

CP Table III - CORRECTIVE ACTION PROGRAM Table of Detected Hazardous and Solid

Waste Constituents and the Groundwater Protection Standard

CP Table IIIA - CORRECTIVE ACTION PROGRAM Table of Indicator Parameters and the Groundwater Protection Standard

CP Table IV - COMPLIANCE MONITORING PROGRAM Table of Hazardous and Solid Waste Constituents and Practical Quantitation Limits or Method Quantitation Limits for Compliance Monitoring

CP Table IVA - COMPLIANCE MONITORING PROGRAM Table of Detected Hazardous Constituents and the Groundwater Protection Standard for Compliance Monitoring

CP Table V - Designation of Wells by Function

CP Table VI - Compliance Period and Post Closure for RCRA-Regulated Units

CP Table VII - Reporting Requirements

CP Table VIII - Compliance Schedule

CP Table IX - Description of Uppermost Aquifer

Note to the Permittee: All responses to each item in Section XI of the application form should be submitted under Appendix XI- Compliance Plan. The applicant should use the MS Word formatted Tables provided in the Part B application to include site-specific information that will become part of the final draft permit. For consistency, the tables provided in the application are formatted to be accessible, and the agency will no longer accept site-specific tables created by the applicant. **Convert the tables to the PDF format when submitting the application.** Do not delete any areas of the application form that are not applicable, submit answers to these areas with a response of either 'Reserved' or 'Not Applicable' in the Appendix XI. In addition, if material supporting a response is located elsewhere in the application, the response should provide details as to the specific location within the referenced material.

One of the primary goals of the performance based Compliance Plan is the wells listed in, CP Table V - Designation of Wells by Function (to be included in the final Compliance Plan) are the wells in which the GWPS must be met to verify compliance with Compliance Monitoring program or corrective action objectives, and to change the table would require a modification. On the other hand, the following types of wells Corrective Action Observation Wells, Corrective Action System well, etc., that are included in "Attachment A" maps of the final draft Compliance Plan, should be flexible. The purpose is to provide the permittee with the authority to alter the groundwater monitoring system and Corrective Action System designs, as necessary, to proactively address changing environmental conditions without modifying or amending the Compliance Plan. An application to modify/amend the compliance plan is only required if wells listed in CP Table V are changed; consequently, Corrective Action Observation and Corrective Action System Wells are not listed in CP Table V of the compliance plan so they may be added or removed without modifying/amending the compliance plan. Notification of proposed changes to the groundwater monitoring system and Corrective Action System designs can be included in the semiannual or annual report required by CP Table VIII - Compliance Schedule (to be included in the final Compliance Plan).

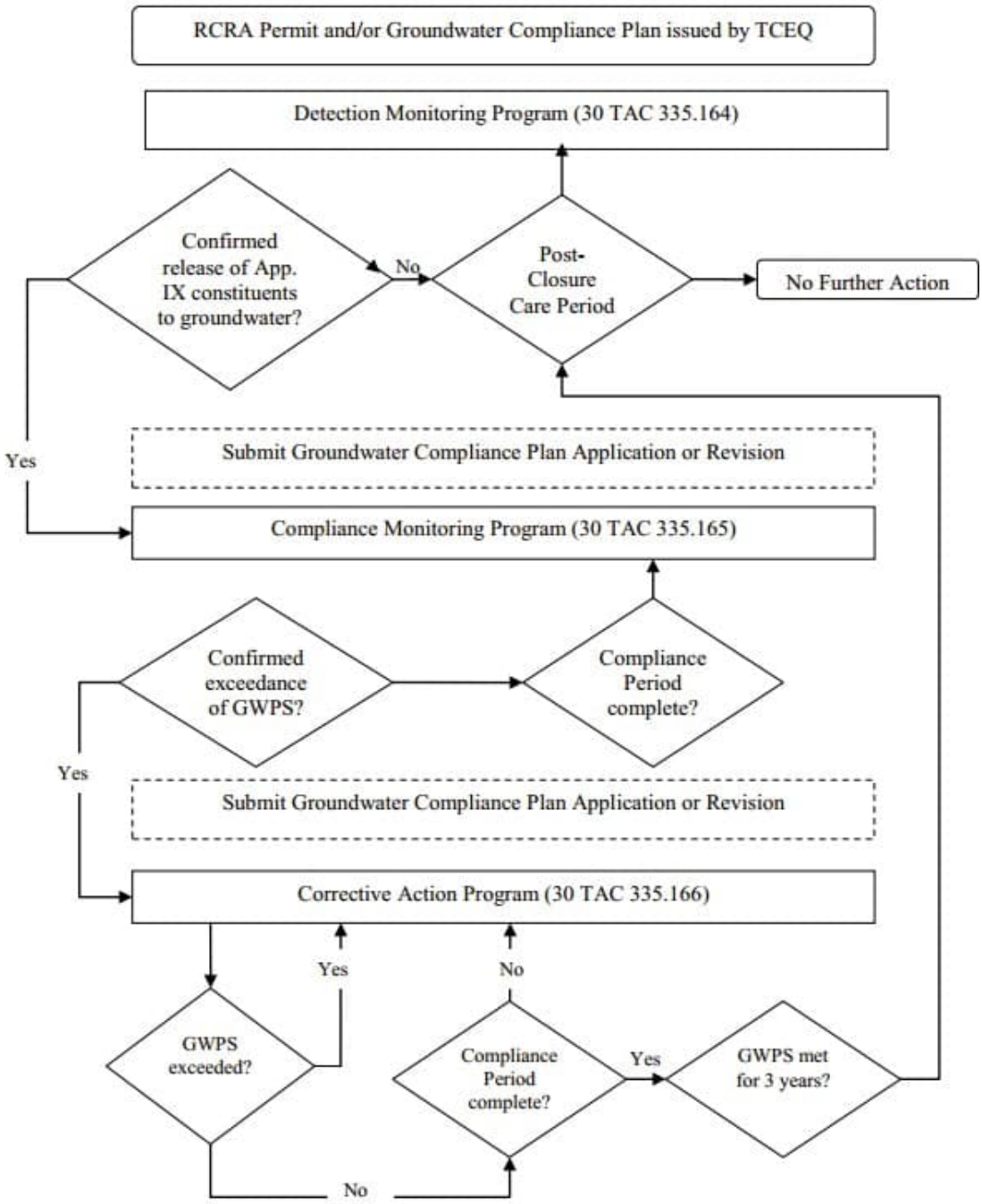
Figure 1 - Overview of Required Submittals And Revisions Associated with TCEQ Groundwater Compliance Plan Application

Type of Compliance Plan Application or Revision	Minimum Required Submittals				Additional Application Submittals Or Revisions					
	Description of Modification	Public Notification Evidence	Fee Payment Evidence	Part B, Section I	Section XI. A.	Section XI.B	Section XI.C	Section XI.D	Section XI.E	Attachment A
				General Information	Site-Specific Information	Groundwater Protection Standard	Compliance Monitoring Program	Corrective Action Program	Financial Assurance Cost Estimates	Alternate Concentration Limits
RCRA Permitted Units										
Compliance Monitoring Program, Commencement or modification per 30 TAC 335.165.	•	•	•	•	•	•	•	o	•	■
Corrective Action Program, commencement or modification per 30 TAC 335.166.	•	•	•	•	•	•	o	•	•	■
Compliance Period, termination or extension per 30 TAC 335.162.	•	•	•	•	■	o	•	o	■	o
Solid Waste Management Units										
Corrective Measure Implementation (CMI), per 30 TAC 335.167.	•	•	•	•	•	•	■	•	•	o
Corrective Action Program termination.	•	•	•	•	■	o	•	o	o	o

Note:

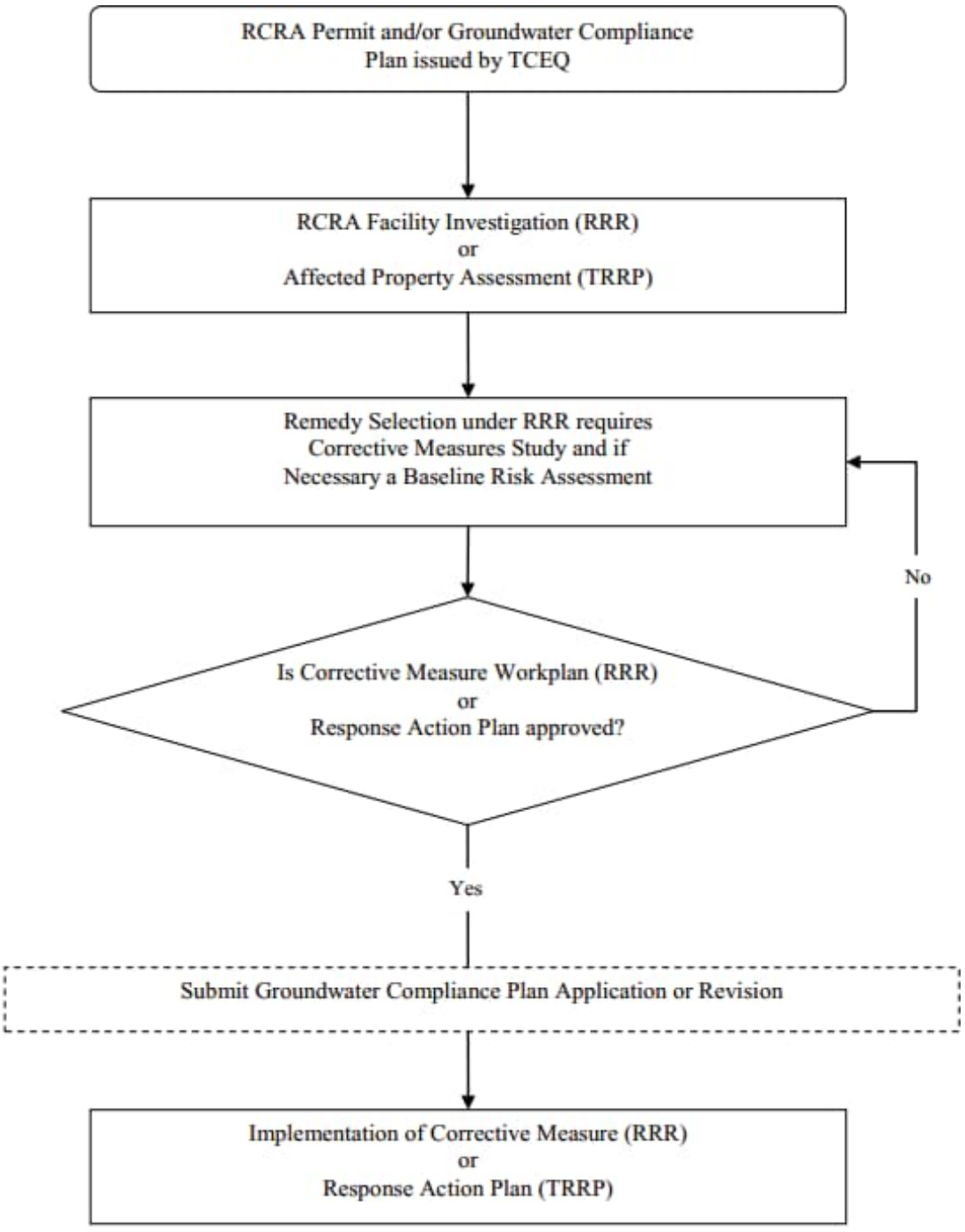
- • Submittal of additional or revised information required.
- o No submittal of additional or revised information required.
- ▪ Possible submittal of additional or revised information required

Figure 2 - Summary of Groundwater Monitoring and Compliance Plan Application Requirements for Regulated Waste Management Units (30 TAC 335 Subchapter F)



Note:
- GWPS = Groundwater Protection Standard (See Section XI.B. of this document, and 30 TAC 335.158 – 160)
- App. IX = Groundwater Monitoring List, 40 CFR 264 Appendix IX.
- Compliance Period = See Section XI.E. of this application, and 30 TAC 335.162.

Figure 3 - Summary of Compliance Plan Applications Requirements for Solid Waste Management Units (SMMUS) (30 TAC 335.167)



Note:
(RRR) – Risk Reduction Rules, 30 TAC 335
(TRRP) – Texas Risk Reduction Program, 30 TAC 350

A. Site Specific Information

Ponds Waste Management Area (WMA; Stormwater Pond and Bauxite Pond)

Groundwater monitoring for the Ponds WMA is under a corrective action program established within the existing Compliance Plan. PRSI operates a groundwater recovery system for the Ponds WMA to remove light non-aqueous phase liquid (LNAPL) and dissolved-phase hydrocarbons from affected wells in Groundwater Regions 3 and 4. Groundwater Regions 3 and 4 are encompassed by the Site-Wide Plume Management Zone (PMZ). Groundwater protection standards within the PMZ are based on critical groundwater to surface water Protective Concentration Limits (PCLs). The groundwater protection standards for the Ponds WMA are consistent with those within the PMZ. A description of the approved corrective action system is provided in Appendix XI.D.6.1.

Moat

Groundwater monitoring for the Moat is conducted under a compliance monitoring program established within the existing Compliance Plan. A description of the compliance monitoring program is included in Appendix XI.C.1.

Refinery Site-Wide Plume Management Zone and Region 7 Plume Management Zone

The existing Compliance Plan currently incorporates a site-wide response action and groundwater monitoring program to address groundwater impacts from sources other than RCRA-regulated units (i.e. historical releases from piping, product tanks, and non-RCRA solid waste management units) at the Main Refinery. This system is operating satisfactorily in all groundwater regions within the refinery and no changes are requested with this permit renewal. Response Action Plans (RAPs) for the site-wide PMZ and groundwater Region 7 PMZ are included in Appendices XI.D.6.1 and XI.D.6.2, respectively.

West Property Plume Management Zone

The West Property was added to the facility boundary as a Class 2 permit modification submitted on May 30, 2024. At the time of submittal, only the facility boundary was revised. PRSI proposes a Class 2 modification with this permit renewal to make changes to the existing site-wide groundwater monitoring program. The West Property PMZ was governed under the Texas Risk Reduction Program prior to integration of the West Property into the facility boundary. An Affected Property Assessment Report (APAR) was submitted on August 26, 2011 documenting assessments conducted from 2006 to 2011. On March 23, 2012 a RAP was submitted which included soil and groundwater response action objectives and response action design for the West Property (See Appendix XI.D.6.3). Results of groundwater monitoring events conducted between March 2012 and December 2016 were submitted semi-annually to TCEQ in groundwater monitoring reports. The first Response Action Effectiveness Report (RAER) was submitted in 2017, documenting the results and effectiveness of response actions conducted through 2016. Subsequent RAERs were submitted triennially, in 2020 and 2023.

Three WMUs were addressed in the RAP as follows:

- Above-ground WMU PP002/PM024: This WMU, located in the "Former Beater Room", was previously used for the storage of PCB-containing materials and equipment. A 20-inch thick covered concrete foundation beneath this WMU serves as an engineered cap to prevent possible exposure to underlying soil until demolition of the WMU is completed to allow assessment of the underlying soil. In accordance with the RAP, the cap has been inspected semi-annually in June and December of each year by a Texas-licensed Professional Engineer (P.E.), with the exception of December 2023. On November 28, 2023, PRSI requested access to the Beater Room be restricted due to observed structural issues with the building and safety concerns for human access to the building. The inspection findings of the cap for June 2021, December 2021, June 2022, December 2022, and June 2023 indicate the cap has remained structurally sound and in good condition.

- **Below-ground WMU PP017: $^{GW}Soil_{Ing}$ PCL exceedances of arsenic and lead are addressed within a PMZ.**
- **Below-ground WMU PP026/PM020: Lead $^{GW}Soil_{Ing}$ PCL exceedances are addressed within a PMZ.**

Two PMZs were established at the Site: one north of Little Vince Bayou (PMZ North) and one south of Little Vince Bayou (PMZ South). PMZ North is defined by PCE, TCE, vinyl chloride, and pentachlorophenol $^{GW}GW_{Ing}$ PCL exceedances at MW-7 only and PCBs, arsenic, and lead $^{GW}Soil_{ing}$ PCL exceedances in soil. PMZ South is defined by benzene and arsenic $^{GW}GW_{Ing}$ PCL exceedances in groundwater and arsenic and lead $^{GW}Soil_{Ing}$ PCL exceedances in soil.

These WMUs and PMZs have been added to CP Table II as newly-identified SWMUs and an AOC. Three additional areas where WMUs have not achieved closure are also identified as new SWMUs. These units are also shown on CP Attachment A Sheets 6 and 9. Details of the groundwater monitoring program, cost estimates, and compliance schedules for the West Property are provided in CP Tables III, IIIA, V, VII, and VIII.

1. General Site Information (provide the following information): **See Appendix XI.A**
   a. An overall plan view map of the entire facility delineating the facility's property boundary, Facility Operations Area (FOA) boundaries, as applicable, and the plume management zone (PMZ) boundaries as applicable;

   All CP Attachment A Maps should be provided in Appendix XI of the application.

   b. A 7.5 minute U.S.G.S. quadrangle topographic map showing the entire facility;
      NOTE: This information is supplemental only and is not intended to be included as figures in the final draft permit.
   c. All oversized (larger than 8.5" by 11") drawings submitted in accordance with A, above, should be accompanied with legible photocopies of the reduced drawing on 8.5" by 11" sheet(s) of paper which shall be used as "CP Attachment A" maps in the final draft Permit/Compliance Plan. The applicant should title the map(s) accordingly as "CP Attachment A, Sheet 1 of xx - Facility Site Map"; "CP Attachment A, Sheet xx of xx, FOA Lateral Boundary Map"; "CP Attachment A, Sheet xx of xx, PMZ Boundary Location Map"; and
   d. Aerial photographs through time depicting changes in the land use, if available.
      NOTE: This information is supplemental only and is not intended to be included as figures in the final draft permit

2. Waste Management **See Appendix XI.A**
   Provide a complete list and a plan view drawing(s) locating and identifying the following waste management units at the scale of 2.5 centimeters (1 inch) equal to not more than 61.0 meters (200 feet). All oversized (larger than 8.5" by 11") drawings should be accompanied with legible photocopies of the reduced drawing on 8.5" by 11" sheet(s) of paper. Please provide information for each waste management unit listed below on CP Table XI.A.1. - Facility History for Waste Management Units.

   All CP Attachment A Maps should be provided in Appendix XI of the application.

   a. All hazardous waste management units regulated under the Industrial Solid Waste and Municipal Hazardous Waste Rules (Chapter 335) required to be monitored in accordance with 30 TAC 335.164 (Detection Monitoring),

335.165 (Compliance Monitoring Program) and 335.166 (Corrective Action Program);

b. All solid waste management units (SWMUs) and Areas of Concern (AOCs) regulated under 335.167 which are recommended for further investigation and/or corrective action in the RCRA Facility Assessment (RFA) shall include those identified in accordance with the permit requirements subsequent to the initial RFA.

c. All on site wastewater treatment units.

3. Facility History **See Appendix XI.A and Appendix IX - CP Tables**

Based on the information provided in CP Table XI.A.1., complete CP Table I - Waste Management Units and Areas Subject to Groundwater Corrective Action and Compliance Monitoring accordingly in the format provided.

For the SWMUs or AOCs listed in CP Table XI.A.1. regulated under 30 TAC 335.167 which are recommended for further investigation and/or corrective action in the RCRA Facility Assessment (RFA), including those identified in accordance with permit requirements subsequent to the initial RFA, complete CP Table II - Solid Waste Management Units and Areas of Concern for which Corrective Action applies pursuant to 30 TAC 335.167. CP Table II will become part of the Compliance Plan.

4. Site Geology, Hydrogeologic Conditions, and Relationship to Surface Water **See Appendix VI.**

For New, modified/amended Compliance Plan, please provide a Geology Report as required by Section VI.B of this application containing updated site geologic information including the following descriptions, maps and tables with appropriate supporting documentation [All maps should be at the scale of 1 inch equal to not more than 200 feet and legible when reduced to 8.5" by 11" letter size paper]:

a. A description of the site geology for the facility. The geologic description should include a site geology map and sufficient cross sections (see Item h. below) to describe the uppermost aquifer and any confining stratigraphic unit(s) beneath the site.

b. A description of the site soils and subsurface lithologies using the Unified Soil Classification System. For those soil units which do not extend beneath the entire site area, the soil description should include a plan view map designating the soil's areal extent;

c. Where a soil remedy is required in a corrective action program of Section XI.D.1. of this application for a Regulated Unit, SWMU and/or AOC, the applicant shall submit a description of contamination in soils of the vadose zone (unsaturated zone above the uppermost aquifer). The soil description should include maps indicating lateral and vertical extent of contamination;

d. A description and designation of the uppermost saturated zone or uppermost aquifer including the name, the type of unit (e.g. perched, confined, etc.,), and groundwater characteristics (flow rates, directions, hydraulic conductivity, etc.). As defined in 40 CFR 260.10, an aquifer is a geologic formation, group of formation, or part of a formation, capable of yielding significant amount of groundwater to wells or springs. Persons using Texas Risk Reduction Program (TRRP) should also consider the definition of a groundwater bearing unit as a saturated geologic formation, group of formations, or part of a formation with a hydraulic conductivity of

equal to or greater than 1 x 10 -5 centimeters/second (30 TAC 350.4(a)40). Based on the information contained in the Geology Report, complete CP Table IX-Description of Uppermost Aquifer. CP Table IX will be come part of the Compliance Plan. **See Appendix XI-CP Tables.**

e. Present the geologic, stratigraphic and hydrogeological information; and

f. Maps indicating the lateral and vertical extent of the contamination for each stratigraphic unit affected, with supporting documentation.

g. Current Contaminant Plume Map(s) Locating and identifying the extent of contamination as determined from previous monitoring on a separate facility base map(s). Locate and identify all monitor wells and waste management units/areas.

h. Cross section Cross section transect lines should be indicated on the Contaminant Plume Map. The applicant, at a minimum, must submit two (2) stratigraphic cross sections for each waste management unit/area. One cross section should be drawn through all the point of compliance wells and the second cross section should be drawn along the direction of the movement of the contaminant plume released from the unit/area. Cross sections should follow the requirements outlined in the Geologic and Hydrogeologic Report of Parts IV and V of this application. At a minimum, the cross sections should include the following information:

   1. the stratigraphic interpretation (e.g., surface grade, uppermost aquifer, aquiclude);
   2. lithology/geologic description of the uppermost aquifer and aquiclude;
   3. the potentiometric surface;
   4. detected non-aqueous phase liquids (NAPLs) and hazardous constituents; and
   5. screen length and screen depth for each well in the cross section.

i. Well Construction diagram The report should include a well construction diagram for all wells used in the cross section. The well construction diagram should include the information in "Attachment B" of this (Compliance Plan) application. The well construction diagram information may be included on the geologic cross-section(s).

j. Describe the potential for any surface water bodies to be hydraulically connected to groundwater containing hazardous constituents. Apply the guidance provided in Determining PCLs for Surface Water and Sediment, RG-366/TRRP-24 Revised, December 2002, in order to determine the water body type and applicable surface water criteria for human health, aquatic life and wildlife, as applicable.

B. Hazardous Constituents In Groundwater And Groundwater Protection Standards (GWPSs)

Hazardous Constituents in Groundwater

For each contaminated hydrogeologic unit beneath a waste management unit/area (40 CFR 264.95), provide a list of all 40 CFR Part 264 Appendix IX hazardous constituents that have been detected in groundwater samples above background values, Practical Quantitation Limits (PQLs), or Method Quantitation Limits (MQLs). Please submit for each unit/area the most recent Appendix IX laboratory analysis results showing the constituents, constituent concentrations, methods used for analysis and associated

laboratory QA/QC. **See Appendix XI.B.**

The groundwater samples (collected for the purpose of determining whether constituents listed in Appendix IX are present) shall be from each waste management unit/area monitoring well system as required by 30 Texas Administrative Code (TAC) 335.164 (detection monitoring program).

If the waste management unit/area is subject to Corrective Action Program required by 30 TAC 335.166 or 335.167 and/or Compliance Monitoring required by 30 TAC 335.165, then list the unit/area and include the list of hazardous constituents and their principal degradation constituents in:

CP Table III - Corrective Action Program Table of Detected Hazardous and Solid Waste Constituents and the Groundwater Protection Standard; and **See Appendix XI - CP Tables.**

CP Table IV - Compliance Monitoring Program Table of Hazardous and Solid Waste Constituents and Practical Quantitation Limits or Method Quantitation Limits for Compliance Monitoring. **See Appendix XI - CP Tables.**

1. Groundwater Protection Standards (GWPSs)
   The GWPS (30 TAC 335.158) is designed to ensure that hazardous constituents (30 TAC 335.159) identified in groundwater and their principal degradational constituents do not exceed concentrations that pose a present or potential hazard to human health and the environment. Compliance monitoring and corrective action programs for a Regulated Unit (30 TAC 335.165 and 335.166) and a corrective action program for a solid waste management unit (SWMU) (30 TAC 335.167) require human health and the environment to be protected from all releases of hazardous wastes and constituents. These corrective action and monitoring programs are evaluated using the GWPS. The GWPS is based on the following criteria.
   a. Background Levels Background levels authorized under 30 TAC 335.160(a)(1) are defined as constituent concentration values that are naturally occurring or are not influenced by contamination coming from the waste management unit. These values are established by statistical analysis of upgradient well sampling data. Analytical results from a sufficient number of independent samples are required to be utilized with an approved and appropriate statistical method. For guidance on the statistical methods consult, Statistical Analysis of Groundwater Data at RCRA Facilities-Unified Guidance, U.S. EPA, March 2009, and any subsequent updates to this document.
      Practical Quantitation Limits (PQLs) or Method Quantitation Limits (MQLs) are utilized in lieu of background values unless a background demonstration establishes concentrations for naturally occurring constituents. The PQL or MQL is defined in the footnote of CP Tables III and IV.
   b. Primary and Secondary Maximum Contaminant Levels (MCLs) Maximum permissible level of a contaminant in water which is delivered to any user of a public water system (40 CFR Part 141 and 143, Federal Safe Drinking Water Act).
   c. Alternate Concentration Limits (ACLs) determined in accordance with 30 TAC 335.160(b) and are defined in footnote of CP Tables III and IV.

2. Establishing the Groundwater Protection Standard (GWPS) **See Appendix XI.CP Tables. GWPs listed for the Ponds WMA, Moat Area, Groundwater Region 7, and Site-Wide Groundwater are the same as in the 2015 Compliance Plan. GWPs for the West Property are those developed in the Response Action Plan (RAP) and used for data evaluation in the subsequent Remedial Action Effectiveness Reports (RAERs) submitted in 2017, 2020, and 2023.**
   a. If background, PQL or MQLs are proposed for the GWPS, the applicant must list all constituents (i.e., detected and degradational constituents) for which a GWPS is being applied for and the appropriate concentration limits. This

information shall be submitted in the format of CP Tables III, and IV.

b. Alternate Concentration Limits (ACLs) ACLs are established at the point of compliance (POC) for a regulated or solid waste management unit (SWMU). All concentration values or limits listed in Section XI.B.1.c. are considered ACLs. ACLs are evaluated in accordance with the provisions of 30 TAC 335.160(b) and other regulations acceptable to the executive director. If an ACL is requested on the basis of Section XI.B.1.c. (MCLs), then no ACL demonstration is necessary. The ACL demonstration must establish constituent concentrations in groundwater in accordance with regulations acceptable to the executive director. This information shall be submitted in the format of CP Tables III and IV. Note that depending upon the rule employed [i.e., 30 TAC 335 Subchapter S - Risk Reduction Rules (RRR) or 30 TAC 350 - Texas Risk Reduction Program (TRRP)], the applicant should determine the GWPS for the point of compliance and point of exposure, as applicable, in accordance with the remedy standard being utilized.

c. If the contaminant plume discharges or has a potential to discharge into surface water, then the facility must also comply with 30 TAC Chapter 307 (Texas Surface Water Quality Standards) unless other regulatory requirements acceptable to the executive director are requested.

C. Compliance Monitoring Program

As required by 30 TAC 335.165, an owner or operator must monitor the groundwater to determine whether Regulated Units are in compliance with the Groundwater Protection Standard (GWPS) under 30 TAC 335.158. The applicant must provide the following information when proposing a compliance monitoring program.

1. Groundwater Monitoring Program Description

a. Describe the proposed groundwater monitoring system to be used to monitor compliance with the GWPS which includes the following information.

(1) Changes, if applicable, from the current detection monitoring system or compliance monitoring system groundwater monitoring program at the waste management unit that will be required to comply with the compliance monitoring program described in 30 TAC 335.165. This description should address changes concerning: **Two changes to the groundwater monitoring program for the Moat Area are proposed: updating the financial assurance cost estimate and reducing sampling frequency from semi-annual to annual. Since 2015, analytical results for Table IV constituents have consistently been non-detect in all point-of-compliance (POC) wells for the Moat area except for toluene and barium. Toluene was detected in approximately 13% of field samples in POC wells at three to four orders of magnitude below the GWPS, compared with detections in 16% of background well samples at the same order of magnitude. Barium was consistently detected in POC wells at one order of magnitude below the GWPS, consistent with detections in the background well. Therefore, PRSI proposes to add toluene and barium to CP Table IV and sample annually for the constituents listed in CP Table IV. If a statistically significant increase in toluene or barium is observed during annual sampling, semi-annual CP Table IVA sampling could be resumed.**

(a) Geological and/or hydrogeological information differences since the submittal of the previous application [must submit an updated Geologic and Hydrogeologic Report required by Section XI.A.4];

(b) Waste management areas/units;
(c) Construction details for monitor wells to evaluate compliance with "Attachment B" well specification requirements;
(d) The number and locations of additional monitor wells [also see Section XI.C.1.b.(2)];
(e) Sample handling, chain of custody, and analytical procedures (also see "Attachment C");
(f) Frequency of monitoring;
(g) Monitoring parameters;
(h) Evaluation of compliance with GWPS (Statistical Methods);
(i) Other Sampling and Analysis Plan information to be compliant with "Attachment C";
(j) Compliance period as defined in Section XI.E.1.c. of the application;
(k) Financial assurance (see Section XI.E.); and
(l) An ACL variance under 30 TAC 335.160(b), if applicable.

(2) The number, depth and location of all monitor wells (Background Wells, Point of Compliance Wells, Observation Wells, Piezometers, etc.). Complete CP Table V - Designation of Wells by Function and make changes as applicable to plans referenced in Section XI.C.1.b. **See Appendix XI.C.1.a and Appendix XI–CP Tables.**

(3) The proposed hazardous constituent monitoring list which is based on constituents that were monitored during detection monitoring (if applicable), constituents detected in accordance with 30 TAC 335.164, and degradational constituents identified in Table CP IV accordingly to develop the constituent list for the Compliance Monitoring Program. Also, list the PQL, MQL, or background concentration for each constituent in CP Table IV. CP Table IV shall become part of the final Compliance Plan to be analyzed at least annually as required by 30 TAC 335.165(7). **See Appendix XI–CP Tables.**

(4) The proposed indicator parameter monitoring list. From the list of constituents and GWPS identified in CP Table IV., complete CP Table IVA - Compliance Monitoring Program, Table of Detected Hazardous Constituents and the Groundwater Protection Standard for Compliance Monitoring, accordingly. CP Table IVA shall become part of the final Compliance Plan to be analyzed at least semiannually as required by 30 TAC 335.165(6).

See Appendix XI–CP Tables.

(5) Frequency of monitoring should be specified in CP Table VIII

See Appendix XI-CP Tables. Semi-annual monitoring is proposed, consistent with the existing Compliance Plan.

(6) Provisions for reporting groundwater data at least on an annual basis should be specified in CP Table VII). **See Appendix XI–CP Tables. Annual Reporting is proposed, consistent with the existing Compliance Plan.**

(7) Annual determination of contamination plume rate and direction of migration. **See Appendix XI–CP Tables.**

(8) Compliance period. Calculate the compliance period as required by 30 TAC 335.162 and 335.165(1)(d). Include calculations and complete CP Table VI - Compliance Period for RCRA-Regulated

Units which shall become part of the final Compliance Plan. **The Compliance Period for the Moat is 12 years beginning in 2007 and ending in 2019. The compliance period has ended; however, as the Moat is included in a Groundwater Corrective Action program, the compliance date is extended in accordance with 30 TAC 333.162(c) until PRSI can demonstrate that the groundwater protection standard has not been exceeded for a period of three consecutive years.**

b. Submit the following plans and reports.

(1) Current Sampling and Analysis Plan The Sampling and Analysis Plan must include information required by 30 TAC 335.163(4) and 335.163(5) and 40 CFR Subpart 270.30(j). For guidance, please see "Attachment C" to the application. **The currently approved Sampling and Analysis Plan (Dated February 2007) is provided in Appendix XI.C.1.b.**

(2) Monitoring System Plan If the applicant is proposing a monitoring well or a monitoring system in the application, the applicable well installation specifications outlined in "Attachment B" of this application should be followed. All new monitoring wells must be installed in accordance with the specifications outlined in "Attachment B", unless an alternative design is approved by the agency prior to installation. If the applicant proposes as part of the monitoring system, any well (existing or proposed) that does not meet or exceed the requirements outlined in "Attachment B", then the proposed alternative design must be described in detail in the Monitoring System Plan and must be submitted with this application. The Monitoring System Plan must include: **See Appendix XI.C.1.a.**

(a) Monitoring System Design and Specifications Certified by a qualified engineer and/or geologist which provides detailed plans and specifications on the monitoring system design; and

(b) Well Drilling and Well Casing Specifications Certified by a qualified engineer and/or geologist which provides details on well casing specification, drilling logs and reports.

(3) Current Geologic and Hydrogeologic Report Provide a report per Section X.I.A.4 of this application discussing the geologic and hydrogeologic conditions of the facility and the specific area affected by the waste management areas. This report should include the most up-to-date information from which the design of the groundwater monitoring system was based. **See Appendix VI.**

2. Waste Management Units Monitored

a. Delineate and identify the following for each waste management unit in the proposed groundwater monitoring program. **See Appendix XI.C.1.a.**

(1) Boundary of the waste management unit and, if applicable, the proposed waste management area which includes more than one waste management unit (identify all waste management units which are included in the waste management area). These waste management units subject to compliance monitoring should be listed in CP Table I - Waste Management Units and Areas Subject to Groundwater Corrective Action and Compliance Monitoring

which shall become part of the final Compliance Plan.

(2) The proposed point of compliance (30 TAC 335.161) and point of exposure wells.

(3) Any other proposed monitor wells such as supplemental wells, observation wells, background wells, etc. If appropriate the groundwater monitoring system should have a sufficient number of wells be designated to monitor the downgradient extent of the plume.

(4) Features which may serve as conduits for subsurface contamination.

b. For each waste management unit/area in the proposed groundwater monitoring system, submit the locations of individual waste management unit/area monitor wells (existing or proposed) and any soil borings (plugged and unplugged) specifically drilled for assessment of contamination. These individual monitor wells shall be identified by respective well number on a plan view drawing and only the background, point of compliance and/or point of exposure wells should be indicated in CP Table V - Designation of Wells by Function. The plan view map depicting the location of individual monitoring wells for compliance monitoring should be labeled as "CP Attachment A, sheet xx of xx" in the text box. The title box should also include reference to the facility name, Permit/Compliance Plan Number, Solid Waste Registration Number, Unit Description or name with Notice of Registration (NoR) Unit No. 0000. The "CP Attachment A" map(s) and CP Table V shall also become part of the final Compliance Plan.

3. Implementation Schedule

Itemize and discuss, in detail, the estimated time schedule necessary for any testing and assessments, system design, construction and installation, and final implementation of the groundwater monitoring program for each Regulated Unit and solid waste management unit. If the schedule of implementation for items are not completed at the time of the application or are not completed at the time of issuance of the final draft Permit/Compliance Plan, then the items should be added to the CP Table VIII - Compliance Schedule of the application. **Groundwater Monitoring is ongoing.**

D. Corrective Action Program

As required by 30 TAC 335.166, the owner or operator must take corrective action to ensure that Regulated Units are in compliance with the Groundwater Protection Standards (GWPS) under 30 TAC 335.158. As required under 30 TAC 335.167, all releases of hazardous constituents from any solid waste management unit at the facility must also be addressed. For existing corrective action programs which have been approved by the TCEQ, the applicant shall provide a copy of the TCEQ corrective action system approval letter, design system specifications and any updates as requested in Section XI.D.3.a.(1) of this section. The applicant must provide the information requested below when proposing a corrective action program which has not been previously approved by the TCEQ including a detailed description of a corrective action or a combination of corrective actions that will remedy the groundwater contamination at the waste management unit and a proposed plan for a monitoring program that will demonstrate the effectiveness of the corrective action.

Ponds WMA (Stormwater Pond and Bauxite Pond)

Groundwater monitoring for the Ponds WMA is governed by a corrective action program in the existing Compliance Plan. PRSI operates a groundwater recovery system for the Ponds WMA to remove LNAPL and dissolved phase hydrocarbons

from affected wells in the vicinity (Groundwater Regions 3 and 4). Groundwater Regions 3 and 4 are encompassed by the Site-Wide PMZ. A description of the approved corrective action system is provided in Appendix XI.D.6.

Site-Wide PMZ

The existing Compliance Plan incorporates a site-wide response action and groundwater monitoring program to address groundwater impacts from sources other than RCRA-regulated units (i.e. historical releases from piping, product tanks, and non-RCRA solid waste management units. Site-wide LNAPL in Groundwater Regions 1, 2, 3, 4, 5, and 6 is addressed through a program including hydrocarbon system recovery, monitoring, and observation wells (for fluid level monitoring only), point of exposure (POE) wells and attenuation monitoring points (AMPs). A description of the Site-Wide PMZ is provided in Appendix XI.D.6.

Groundwater Region 7 PMZ

LNAPL in the vicinity of the Washburn Tunnel is addressed by recovery wells, POE wells, and AMPs governed by the existing Compliance Plan. A description of the Groundwater Region 7 PMZ is provided in Appendix XI.D.6.

West Property Groundwater PMZs

PRSI proposes a Class 2 permit modification with this renewal to add the West Property Groundwater PMZs to the Compliance Plan. A description of the PMZ and approved monitoring program including Alternate Point of Exposure wells is provided in the West Property Remedial Action Plan in Appendix XI.D.6. The approved RAP proposed decontamination and control of dissolved phase COCs in groundwater within the West Property Groundwater PMZs using monitored natural attenuation (MNA).

The owner or operator may also apply for a the Facility Operations Area (FOA) pursuant to the requirements of 30 TAC 350.131 - 350.135 of the Texas Risk Reduction Program (TRRP) rules, provided the applicant meets the FOA pre-approval process steps 1 through 3 approved by the Commission.

Also, the owner or operator may apply for alternative groundwater Corrective Action Program pursuant 30 TAC 335.151, 335.156 and 30 TAC 350, where there are commingled releases from RCRA-regulated unit from one or more SWMUs, PCO, and/or AOC.

1. Type of Corrective Action Proposed
   From the list below, indicate the type of groundwater corrective action proposed for each hazardous waste unit/area. Discuss in detail if more than one corrective action is to be used in a waste management area. Submit the discussion and descriptions as an attachment to the application. See Appendix XI.D.6.
   a. Groundwater well recovery with surface treatment Recovered groundwater from the Ponds WMA, the Site-Wide PMZ, and the Region 7 PMZ is pre-treated at the facility and sent off-site for final treatment.
   b. Groundwater well recovery/surface treatment/re injection
   c. Groundwater well recovery and disposal
   d. Vapor extraction system
   e. Interceptor trench recovery and disposal
   f. Interceptor trench recovery and surface treatment
   g. In-situ treatment - bioreclamation
   h. In-situ treatment - chemical reaction
   i. Barrier walls/encapsulation
   j. Permeable treatment beds
   k. Other, please describe Groundwater in the West Property Groundwater PMZs is addressed through MNA.

2. Program Description

Attach a technical report providing a detailed description of a complete corrective action system including above and below ground equipment/ facilities. Include discussions on the following concerns for each type of corrective action as applicable. **See Appendix XI.D.6.**

a. Recovery Wells

(1) Indicate on a plan view of the waste management area the anticipated location of Recovery Well(s) which would optimize the extraction of the groundwater contaminants.

(2) Indicate on a plan view the estimated radius of influence of each Recovery Well.

(3) Indicate the optimum pumping rate of each Recovery Well determined from the aquifer pump test.

(4) Describe the design of the Recovery Wells and pump system including diameter, construction material, gravel packing, screen slot sizes and patterns, type of pumps and maintenance requirements.

(5) Describe the collection and storage of the contaminated groundwater which is classified hazardous waste (on site storage of hazardous waste shall require compliance with the applicable regulations):

(a) Less than 90-day tanks (see 40 CFR 262.34/40 CFR 265 Subpart J);

(b) Permitted Tanks (see 40 CFR 264 Subpart J);

(c) (Less than 90-day Container Storage Area (see 40 CFR 262.34/40 CFR 265 Subpart I);

(d) Permitted Container Storage Area (see 40 CFR 264 Subpart I); and

(e) Temporary Units (see CFR 264.553).

(6) Describe the treatment and/or final disposition of the hazardous and nonhazardous contaminated groundwater.

b. Vapor Extraction System

(1) Indicate on a plan view of the waste management area the anticipated location of the vapor extraction system which would optimize the extraction of hazardous constituents from the vadose zone.

(2) Describe the construction design of the vapor extraction system in detail, including all diagrams and drawings.

(3) Describe the emission control equipment used to comply with air quality regulations.

(4) Provide the anticipated volatile contaminants to be remediated along with information on the expected effectiveness of the vapor extraction system at the waste management unit.

(5) Provide established treatability data for the proposed design.

(6) Specify the hazardous constituents affected by this type of treatment.

c. Interceptor Trenches

(1) Indicate on a plan view of the waste management area the anticipated location of the interceptor trench.

(2) Provide the construction design.

(3) Describe the procedure for construction.
(4) Describe the liquid removal and collection system.
(5) Describe the surface storage and/or treatment of the contaminated groundwater.
(6) Describe the final disposition of the contaminated groundwater.

d. In-situ Treatment - Chemical Reaction
(1) Characterize the chemical agents to treat the contaminated groundwater and/or soils in the vadose zone.
(2) Provide laboratory treatability data.
(3) Specify the hazardous constituents affected by this type of treatment.
(4) Specify the reaction by products produced during the chemical reactions.
(5) Indicate degradation time for each treated hazardous constituent and any resulting chemical reaction by products.
(6) Describe the potential health risks caused by human exposure to the reaction by products.
(7) Describe potential damage to wildlife, crops, vegetation and physical structures caused by exposure to reaction by products.
(8) Describe the persistence and permanence of the potential effects of the reaction by products.
(9) Describe the method of chemical reactant injection and other important aspects of the system design.

e. In-situ Treatment Bioreclamation
(1) Describe the type of bacteria most appropriate for the degradation of the hazardous constituents present in the groundwater and/or soil in the vadose zone.
(2) Describe the nutrients necessary and application frequency to encourage effective bioreclamation.
(3) Provide laboratory data from treatability studies utilizing the contaminated groundwater and describe any potential hazardous by products.
(4) Indicate the degradation time for each hazardous constituent affected by this treatment.
(5) Describe the method of injecting the bacteria and nutrients and describe the delivery system design.

f. Barrier Walls
(1) Provide laboratory permeability data using the actual contaminated groundwater.
(2) Describe the barrier wall materials.
(3) Summarize construction design and installation procedures.

g. Permeable Treatment Beds
(1) Provide laboratory data of treatability simulations using actual contaminated groundwater in combination with the material proposed to be used in treatment beds.
(2) Discuss the properties of the treatment material which would make it effective for use at this site.
(3) Indicate which hazardous constituents will be affected by this treatment. Indicate the reactions which will take place and the resulting reactant by products. Discuss the anticipated lifetime of the permeable treatment beds.
(4) Provide the construction design and installation procedures.

h. Other

Discuss in detail, any other corrective action (soils and groundwater) not included above which is proposed for use at the affected waste management area(s).

3. Groundwater Monitoring and Corrective Action Program Description

a. Describe the proposed groundwater monitoring system to be used to monitor corrective action and compliance with the GWPS which includes the following information.

Ponds WMA (Stormwater Pond and Bauxite Pond)

A description of the groundwater monitoring program for the Ponds WMA is provided in Appendix XI.D.3. The program includes background, Point of Compliance (POC), Corrective Action System (CAS), and Corrective Action Observation (CAO) wells. All wells are sampled semiannually. Copies of available boring and well completion logs are provided in Appendix VI.

Site-Wide PMZ

A description of the groundwater monitoring program for the Site-Wide PMZ is provided in Appendix XI.D.3. The program includes APOE, CAS, and CAO wells and AMPs which are sampled semiannually. Copies of available boring and well completion logs are provided in Appendix VI.

Groundwater Region 7 PMZ

A description of the groundwater monitoring program for the Groundwater Region 7 PMZ is provided in Appendix XI.D.3. The program includes APOE wells and AMPs along the Washburn Tunnel property boundary. Copies of available boring and well completion logs are provided in Appendix VI.

West Property Groundwater PMZ

A description of the groundwater monitoring program for the West Property Groundwater PMZ is provided in the RAP in Appendix XI.D.6.3. The program includes AMPs and Alternate Point of Exposure wells which are sampled semiannually. Copies of available boring and well completion logs are provided in Appendix VI.

(1) Changes, if applicable, from the current groundwater monitoring program at the waste management unit that will be required to comply with the corrective action monitoring program described in 30 TAC 335.166. This description should address changes concerning: **The following changes are proposed to the groundwater monitoring program:**

- **Updating the financial assurance cost estimates**
- **Integrating the West Property into the groundwater monitoring program**

The West Property groundwater monitoring program including methods, analytes, and GWPS have been previously approved under the Texas Risk Reduction Program.

(a) Geological and/or hydrogeological information differences since the submittal of the previous application [must submit a Geologic and Hydrogeologic Report in accordance with Section XI.A.4;

(b) Waste management areas/units;

(c) Construction details for monitor wells to evaluate compliance with "Attachment B" well specification

requirements;

(d) The number and locations of additional monitor wells [must submit the Monitoring System Plan/Report required by Section XI.D.3.c.(2);
(e) Sample handling, chain of custody, and analytical procedures (also see "Attachment C");
(f) Frequency of monitoring;
(g) Monitoring parameters;
(h) Evaluation of compliance with GWPS (statistical methods);
(i) Other Sampling and Analysis Plan information to be incompliant with "Attachment C";
(j) Compliance period as defined in Section XI.E.1.c. of the application;
(k) Financial assurance; and
(l) An ACL variance under 30 TAC 335.160(b), if applicable.

(2) The number, depth and location of all monitor wells (Background Wells, Point of Compliance Wells, Corrective Action Observation Wells, Supplemental Wells, piezometers, etc.) and all Recovery Wells and complete CP Table V - Designation of Wells by Function. Also, make revisions as applicable to plans referenced in Section XI.D.3.c. **See Appendices XI.D.3, XI.D.6.3, and CP Tables.**

(3) The proposed hazardous constituent monitoring list which is based on constituents that were monitored during detection monitoring (if applicable), constituents detected in accordance with 30 TAC 335.164, and degradational constituents identified in CP Table III accordingly to develop the constituent list for the Corrective Action Monitoring Program. CP Table III shall become part of the final Compliance Plan. **The Ponds WMA, Groundwater Region 7, and Site-Wide Groundwater constituent lists are unchanged from the existing Compliance Plan. The West Property Groundwater PMZs have been added to CP Table III.**

(4) The proposed indicator parameter monitoring list. From the list of constituents and GWPS identified in CP Table III complete CP Table IIIA - Corrective Action Program Table of Indicator Parameters and the Groundwater Protection Standard, accordingly. CP Table IIIA shall become part of the Compliance Plan to be analyzed at least semiannually as required by 30 TAC 335.166(7). **The Ponds WMA, Groundwater Region 7, and Site-Wide Groundwater indicator parameter lists are unchanged from the existing Compliance Plan. The West Property Groundwater PMZ indicator parameters from the approved RAP have been added to CP Table IV.**

(5) Frequency of monitoring should be specified in CP Table VIII **Monitoring will continue semi-annually.**

(6) Provisions for reporting groundwater data at least on an annual basis should be specified in CP Table VII) **PRSI requests that reporting for the Ponds WMA, Groundwater Region 7, and Site-Wide Groundwater be revised from semi-annual to annual. Monitoring frequency, wells monitored, groundwater recovery, and LNAPL removal for those units remain unchanged. As shown in the Semi-Annual Corrective Action and Compliance Monitoring Report for July 2024 to**

December 2024, site conditions remain generally stable. The groundwater recovery system maintains hydraulic control and a high percentage of wells within these areas (95% in the Ponds WMA and Site-Wide PMZ, 71% in Groundwater Region 7) show no LNAPL and no exceedances of groundwater protection standards. Therefore, PRSI is recommending a reduction in reporting frequency. Reporting for the West Property Groundwater will be revised from triennial (in the approved RAP) to annual.

(7) Annual determination of contamination plume rate and direction of migration. Determination of the rate and direction of the contaminant plume will be included in the annual reports.

(8) Compliance period. Calculate the compliance period as required by 30 TAC 335.162 and 335.165(1)(d). Include calculations and complete CP Table VI - Compliance Period for RCRA-Regulated Units which shall become part of the final Compliance Plan
The compliance period for the Ponds WMA is included in CP Table VI in Appendix VI.D.3 and is unchanged from the 2015 Compliance Plan. The compliance period has ended; however, as the Ponds WMA is included in a Groundwater Corrective Action program, the compliance date is extended in accordance with 30 TAC 333.162(c) until PRSI can demonstrate that the groundwater protection standard has not been exceeded for a period of three consecutive years.

b. Proposed methods of evaluating the effectiveness of the corrective action in the saturated and vadose zone. Not applicable.

c. Submit the following plans and reports.

(1) Current Sampling and Analysis Plan The Sampling and Analysis Plan must include information required by 30 TAC 335.163(4) and 335.163(5) and 40 CFR Subpart 270.30(j). For guidance, please see "Attachment C" to the application. See Appendix XI.C.1.b and XI.D.6.3.

(2) Groundwater Recovery and Monitoring System Plan At a minimum, the plan must include: See Appendices XI.D.6.1 through 3.

(a) Recovery System Plan The applicant should propose a recovery system design that will achieve the performance requirement to protect human health and the environment. The plan should provide detailed plans, information and specifications on the recovery system's design and well installation specifications. All new recovery wells must be installed in accordance with applicable specifications outlined in "Attachment B", unless an alternative well design is approved by the agency prior to installation of the well. The Recovery System Plan must include Recovery System Design and Specifications Certified by a Texas Registered Professional Engineer. The certification must be sealed by a licensed Professional Engineer, with current license, along with the Registered Engineering Firm's name and Registration Number as required by the Texas Engineering Practice Act.;

(b) Monitoring System Plan If the applicant is proposing a monitoring well or a monitoring system in the application, the applicable well installation specifications outlined in

"Attachment B" of this application should be followed. All new monitoring wells must be installed in accordance with the specifications outlined in "Attachment B", unless an alternative design is approved by the agency prior to installation. If the applicant proposes as part of the monitoring system, any well (existing or proposed) that does not meet or exceed the requirements outlined in "Attachment B", then the proposed alternative design must be described in detail in the Monitoring System Plan and must be submitted with this application. The Monitoring System Plan must include:

(i.) Monitoring System Design and Specifications Certified by a qualified engineer and/or geologist which provides detailed plans and specifications on the monitoring system design; and

(ii.) Well Drilling and Well Casing Specifications Certified by a qualified engineer and/or geologist which provides details on well casing specification, drilling logs and reports.

(3) Current Geologic and Hydrogeologic Report - Provide a report per Section XI.A.4 of this application discussing the geologic and hydrogeologic conditions of the facility and the specific area affected by the waste management areas. This report should include the most up-to-date information from which the design of the groundwater monitoring system was based. **See Appendix VI.**

4. Waste Management Units/Areas Monitored Under Corrective Action Programs

a. Delineate and identify the following for each waste management unit/area in the proposed groundwater monitoring and corrective action programs.

(1) Boundary of the waste management unit and, if applicable, the proposed waste management area which includes more than one waste management unit (identify all waste management units which are included in the waste management area). These waste management units/areas subject to corrective action pursuant to 30 TAC 335.166 and 335.167 should be listed in CP Table I - Waste Management Units and Areas Subject to Groundwater Corrective Action and Compliance Monitoring. CP Table I shall become part of the final Compliance Plan. **See Appendix XI-CP Tables.**

(2) The proposed point of compliance (30 TAC 335.161), point of exposure wells, or alternate point of exposure wells. **See Appendix XI-CP Tables and XI-CP Attachment A.**

(3) Any proposed monitor wells such as supplemental wells, observation wells, background wells, etc. If appropriate the groundwater monitoring system should have a sufficient number of wells to monitor the downgradient extent of the plume. **See Appendix XI-CP Tables and XI-CP Attachment A.**

(4) Features which may serve as conduits for subsurface contamination. **There are underground pipelines, electrical conduits, ditches, and sewers throughout the facility that could serve as conduits.**

(5) Corrective action system. **The corrective action systems for the**

Ponds WMA, Site-Wide PMZ, and Groundwater Region 7 PMZ are identified in Appendix XI.D.3 and shown in Appendix XI-CP Attachment A.

b. For each waste management unit/area in the proposed groundwater monitoring system, submit the locations of individual waste management unit/area monitor wells (existing or proposed) and any soil borings (plugged and unplugged) specifically drilled for assessment of contamination. These individual monitor wells shall be identified by respective well number on a plan view drawing and only the background, point of compliance, point of exposure wells and/or alternate point of exposure wells should be indicated in CP Table V - Designation of Wells by Function. The plan view map depicting the location of individual monitoring wells for corrective action monitoring should be labeled as "CP Attachment A, sheet xx of xx" in the text box. The title box should also include reference to the facility name, Permit/Compliance Plan Number, Solid Waste Registration Number, Unit

Description or name with Notice of Registration (NoR) Unit No. 0000. The "CP Attachment A" map(s) and CP Table V shall also become part of the final Permit/Compliance Plan. Plan view drawings are provided in Appendix XI-CP Attachment A.

5. Waste Management Units/Areas Addressed Under Other Corrective Action Programs -Facility Operations Area (FOA), specific to the requirements of 30 TAC 350.131 - 350.135. The Permittee should also complete Sections XI.D.4. for other units not addressed by the FOA that may require corrective action outside the FOA boundary. For other units not addressed by the FOA, either within the FOA or outside the FOA which may require compliance monitoring, the Permittee should complete Section XI.C. of this application accordingly.

Not applicable.

a. Provide an approved version of the FOA Qualifying Criteria Checklist and evidence that Steps 1 through 3 of the FOA pre-approval process has been approved by the Commission.

b. Provide a discussion on exceptions to the TRRP rule requested.

c. Provide a summary of the SWMUs/AOCs that will be addressed within the FOA boundary and a discussion of the multiple sources of COCs present and how FOA will better address these sources.

d. Provide maps of appropriate scale depicting the following (maps may be combined where appropriate):

(1) The number, location and type of monitoring points in each stratigraphic unit to be monitored individual monitoring wells should be identified by respective well number on a plan view drawing, to include the background, Point of Compliance (POC), Point of Exposure (POE), FOA Boundary of Compliance wells, FOA piezometers or supplemental wells, Corrective Action Observation ((CAO), Corrective Action System (CAS) wells that are applicable for FOA monitoring program should be labeled as "CP Attachment A, sheet no xx of xx" in the title box. The title box should also include reference to the facility name, Permit/ Compliance Plan Number (00000), TCEQ Solid Waste Registration Number and Unit Description or Name. The "CP Attachment A" map(s) shall become part of the final Permit/Compliance Plan.
(2) HWMUs/SWMUs/AOCs addressed
(3) Surrounding land use
(4) FOA lateral boundaries

(5) Potential source areas
(6) Potentiometric surface of all relevant transmissive units
(7) Surrounding water wells
(8) Extent of known contamination in each transmissive unit
(9) Areas of potential ecological impact
(10) Known occurrences of NAPL or DNAPL in each transmissive units
(11) FOA access control components

e. Provide cross-sections in accordance with Section XI.A.4. depicting the following (maps may be combined where appropriate);
   (1) The vertical boundaries of the FOA;
   (2) The vertical extent of contamination;
   (3) Groundwater level elevations for each transmissive unit.

f. Provide tabulated information for;
   (1) Results of Appendix IX GW sampling.
   (2) Proposed PCLs for each hazardous constituent and principal degradational constituent for each monitoring point with supporting documentation (including a discussion of exposure pathways) should be listed in CP Table III - CORRECTIVE ACTION PROGRAM Table of Detected Hazardous and Solid Waste Constituents and the Groundwater Protection Standard. CP Table III shall become part of the final Compliance Plan.
   (3) The proposed indicator parameter monitoring list. From the list of constituents and GWPS identified in CP Table IIIA. CP Table IIIA shall become part of the Compliance Plan to be analyzed at least semiannually as required by 30 TAC 335.166(7).
   (4) Only the background, POC, POE, FOA Boundary of Compliance wells should be listed in CP Table V which shall become part of the final Permit/Compliance Plan.

g. Provide a discussion of the types of corrective action that will be employed to address contaminated media.
h. Provide detailed descriptions of GW recovery and other remedial technologies such as vapor extraction, interceptor trenches, hydraulic containment, barrier walls, etc., including radius of influence, estimated optimum recovery rates, location of collection, storage or disposal facilities.
i. Provide a detailed description of the ground water monitoring system including placement of monitoring wells, hydrogeologic characteristics of monitored units and well completion details.
j. Provide a Sampling and Analysis plan for the proposed FOA that includes development of COCs to be monitored, sampling methodology, sample handling procedures, sampling frequency and statistical procedures for evaluating analytical results (Appendix C).
k. Propose a methodology for evaluating the effectiveness of remedial measures and potential remedial system enhancements.
l. Propose a reporting schedule to provide updated information on the installation and operation of remedial and monitoring systems.
m. Provide Financial Assurance in accordance with Section XI.E.
n. Provide draft language intended to comply with the deed notification requirements of 30 TAC 350.111 and 350.135(a)(11).
o. Provide a summary of the approved workers protection plan.
p. Provide a discussion of areas of ecological impact, if any, and development of associated Protective Concentration Limits (PCLs).
q. Provide a discussion of how NAPL occurrences, if any, will be addressed inside and outside the FOA.
r. Provide a schedule of implementation for items not completed at the time of application See also Section XI.D.8.

6. Waste Management Units/Areas Monitored Under Corrective Action Programs - Plume Management Zone (PMZ) **See Appendices XI.D.6.1 through XI.D.6.3.**

a. Please provide a summary of the HWMUs and SWMUs/AOCs that will be addressed within the PMZ boundary.

b. Please provide a discussion of the multiple sources of COCs present and how PMZ will better address these sources.

c. Please provide maps of appropriate scale depicting the following (maps may be combined where appropriate);

(1) HWMUs/SWMUs/AOCs addressed
(2) surrounding land use
(3) PMZ lateral boundaries
(4) potential source areas
(5) Potentiometric surface of all relevant transmissive units
(6) Surrounding water wells
(7) extent of known contamination in each transmissive unit
(8) number, location and type of monitoring points in each stratigraphic unit to be monitored
(9) Areas of potential ecological impact
(10) known occurrences of LNAPL or DNAPL in each transmissive unit

d. Please provide sufficient cross-sections depicting the following (maps may be combined where appropriate);

(1) The vertical boundaries of the PMZ;
(2) The vertical extent of contamination;
(3) potentiometric surfaces for each transmissive unit.

e. Please provide tabulated information for;

(1) history of all relevant units or AOCs;
(2) summary of hydrogeologic data for each affected transmissive unit;
(3) results of Appendix IX GW sampling;
(4) proposed PCLs for each constituent for each monitoring point (Point of Exposure wells, alternate point of exposure wells, etc.) with supporting documentation (including a discussion of exposure pathways). This should also include the designation/ establishment of sufficient number of Attenuation Monitoring Points (AMPs) beginning at an appropriate hydraulically upgradient location within the groundwater protective concentration level exceedance (PLCE) zone and continuing down the approximate central flow path of the constituent of concern (COC) in the downgradient extent of the Plume Management Zone(s) in accordance with 30 TAC 350.33(f)(4)(D).
(5) Establish/Calculate Attenuation Action Levels (AALs) (critical PCLs) for each attenuation monitoring point in accordance with 30 TAC 350.33(f)(4)(D)(ii). The established AALs (critical PCLs) for each AMP well should be graphically presented in table format on the plan view map depicting the location of individual monitoring wells (including AMP wells) for corrective action monitoring labeled "CP Attachment A, Sheet xx of xx", referenced in XI.D.4.b.

f. Please provide a discussion of the types of corrective action that will be employed to address contaminated media.

g. Please provide detailed descriptions of GW recovery and other remedial technologies such as vapor extraction, interceptor trenches, hydraulic containment, barrier walls, etc., including radius of influence, estimated optimum recovery rates, location of collection, storage or disposal facilities.

h. Please provide a detailed description of the groundwater monitoring system including placement of monitoring wells, hydrogeologic characteristics of monitored units and well completion details.
i. Please provide a Sampling and Analysis plan for the proposed PMZ that includes development of COCs to be monitored, sampling methodology, sample handling procedures, sampling frequency and statistical procedures for evaluating analytical results.
j. Please propose a methodology for evaluating the effectiveness of remedial measures and potential remedial system enhancements.
k. Please propose a reporting schedule to provide updated information on the installation and operation of remedial and monitoring systems.
l. Please provide a thorough detailed description of an estimate of all costs that will be incurred by implementing, operating, and maintaining the corrective action and monitoring systems addressed by the compliance plan.
m. Please provide draft language intended to comply with the deed notification requirements of 350.111, and schedule to verify compliance with institutional control requirements in accordance with 30 TAC 350.31(g) which provides notice of the existence and location of the PMZ and which prevents exposure to groundwater from this zone until such a time as constituents of concern may be reduced to below the GWPS.
n. Schedule for notification requirements if an unexpected event occurs, or a condition is detected, during post-response action care period which indicates that additional response actions will be required at an affected property pursuant to 30 TAC 350.33(k).
o. Please provide a summary of the approved soil response action plan.
p. Please provide a discussion of areas of ecological impact, if any, and development of associated PCLs.
q. Please provide a discussion of how NAPL occurrences, if any, will be addressed inside the PMZ.
r. Please provide a schedule of implementation for items not completed at the time of application {See also Section XI.D.8.}

7. Waste Management Units/Areas Monitored Under Alternative Corrective Action Program for Co-mingled plumes Alternative groundwater Corrective Action Program apply, pursuant 30 TAC 335.151, 335.156 and 350, for commingled release from RCRA-regulated unit and from one or more SWMUs and/or AOC.
Not applicable.

a. Complete Sections XI.D.1. through 4.;
b. In addition to the CP Attachment A maps in Section XI.D.4.b., CP Attachment A maps should clearly depict those waste management unit or areas of the facility which have commingled plumes and the alternative corrective action applies.
c. Please provide a schedule of implementation for items not completed at the time of application {See also Section XI.D.8.}

8. Implementation Schedule
Itemize and discuss, in detail, the estimated time schedule necessary for any testing and assessments, system design, construction and installation, and final implementation of the groundwater monitoring program for each Regulated Unit and solid waste management unit. If the schedule of implementation for items are not completed at the time of the application or are not completed at the time of issuance of the final draft Compliance Plan, then the items should be added to the CP Table VIII - (Compliance Schedule) of the application. **The groundwater monitoring program is ongoing.**

E. Cost Estimates For Financial Assurance

As required by 30 TAC 335.156 and 335.167, the applicant must provide cost estimates for groundwater monitoring and corrective action to determine the amount of financial assurance. Please complete the applicable parts of this form. Cost estimates should be filled out for each proposed corrective action/monitoring system at the site; or any additional corrective action system not covered in this Part. Please note, the Executive Director may request from the applicant documentary evidence for cost estimates.

If an item is not applicable, please mark it NA. Please Complete the following tables, as applicable:

Completed tables are included in Appendix XI.E. The Financial Assurance Cost Estimate Summary is as follows:

Total Cost (Ponds WMA)	**$1,112,000**
Total Cost (Groundwater Region 7)	**$ 809,000**
Total Cost (Site-wide PMZ)	**$1,444,000**
Total Cost (Recovery Wells)	**$ 116,000**
Total Cost (Moat)	**$ 350,000**
Total Cost (West Property)	**$1,297,000**
Grand Total	**$5,128,000**

1. CP Table XI.E. - General Information
2. CP Table XI.E.1. - Corrective Action Program Cost Estimate
3. CP Table XI.E.2.e - Groundwater Monitoring Cost Estimate
4. CP Table XI.E.3. - Financial Assurance Summary

Attachment A

Alternate Concentration Limits

Alternate Concentration Limits (ACLs) must be submitted by hazardous waste facility owners or operators who seek ACLs for any hazardous constituent as provided by 30 TAC 335.160(b) as a part of a compliance monitoring or corrective action program. An ACL demonstration should follow the guidance provided in this attachment. Compliance Plan Application, Section XI.B.2.b. outlines when an ACL demonstration must be conducted. Where possible in "Attachment A", the applicant may copy information previously submitted to the Commission and reference the information submitted in other Sections (Sections I and XI.B. through E.) of this Compliance Plan Application.

Alternate Concentration Limit Demonstration

An ACL petition is based on a demonstration that hazardous constituents detected in the groundwater will not pose a substantial present or future threat to human health or the environment at the ACL levels. Potential adverse effects on both groundwater quality and hydraulically connected surface water quality must be addressed. Using Environmental Protection Agency published lists of 40 CFR Part 264 Appendix IX hazardous constituents, the applicant must submit a list of all contaminants in the groundwater. For all the petitioned ACL constituents, the applicant must address all known synergistic and additive effects on human health and the environment to develop appropriate ACL levels.

Required Information for Alternate Concentration Limits

In addition to rule specific requirements (i.e., 30 TAC Chapter 335 Subchapter S RRR, or 30 TAC Chapter 350 TRRP), the following items must be addressed for each hazardous constituent for which an alternate concentration is sought (CP Tables III and IV, XII.B.). If the information required in this part has been furnished in other parts of Compliance Plan Application, please provide an adequate reference.

1. Potential adverse effects on groundwater quality, considering:
    a. The physical and chemical characteristics of the waste in the Regulated Unit, Solid Waste Management Unit(SWMU) or Area of Concern (AOC), including its potential for migration;
    b. The hydrogeological characteristics of the facility and surrounding land;
    c. The quantity of groundwater r and the direction of groundwater flow;
    d. The proximity and withdrawal rates of groundwater users;
    e. The current and future uses of groundwater in the area;
    f. The existing quality of groundwater, including other sources of contamination and their cumulative impact on the groundwater quality;
    g. The potential for health risks caused by human exposure to waste constituents;
    h. The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and,
    i. The persistence and permanence of the potentially adverse effects.

2. Potentially adverse effects on hydraulically connected surface water quality, considering:
    a. The volume and physical and chemical characteristics of the waste in the Regulated Unit, Solid Waste Management Unit (SWMU) or Area of Concern (AOC);

b. The hydrogeological characteristics of the facility and surrounding land;
c. The quantity and quality of groundwater, and the direction of groundwater flow;
d. The patterns of rainfall in the region;
e. The proximity of the Regulated Unit to surface waters;
f. The current and future uses of surface waters in the area and any water quality standards established for those surface waters;
g. The existing quality of surface water, including other sources of contamination and the cumulative impact on surface water quality;
h. The potential for health risks caused by human exposure to waste constituents;
i. The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and,
j. The persistence and permanence of the potentially adverse effects.

Attachment B

Well Design And Construction Specifications

The following well design and construction specifications should be used as guidance when designing a groundwater Compliance Monitoring Program (Section XI.C.) or a Corrective Action Program (Section XI.D.). This guidance is provided to establish minimum well design and construction specifications for the Compliance Plan.

1. Well drilling methods that minimize potential adverse effects on the quality of water samples withdrawn from the well and that minimize or eliminate the introduction of foreign fluids into the borehole must be utilized.

2. All wells shall be constructed such that the wells can be routinely sampled with a pump, bailer, or alternate sampling device. Piping associated with recovery wells should be fitted with sample ports or an acceptable alternative sampling method to facilitate sampling of the recovered groundwater on a well by well basis.

3. Above the saturated zone the well casing may be two (2) inch diameter or larger schedule 40 or 80 polyvinyl chloride (PVC) rigid pipe or stainless steel or polytetrafluoroethylene (PTFE or "teflon") or an approved alternate material. The PVC casing must bear the National Sanitation Foundation logo for potable water applications (NSF pw). Solvent cementing compounds shall not be used to bond joints and all connections shall be flush threaded. In and below the saturated zone, the well casing shall be stainless steel or PTFE.

   PVC or fiberglass reinforced resin may be used as an alternate well casing material in and below the saturated zone provided that it yields samples for groundwateruality analysis that are unaffected by the well casing material.

4. Any well that has deteriorated due to incompatibility of the casing material with the groundwater contaminants or due to any other factors must be replaced.

5. Well casings and screens shall be steam cleaned prior to installation to remove all oils, greases, and waxes. Well casings and screens made of fluorocarbon resins shall be cleaned by detergent washing.

6. Screen length shall not exceed ten (10) feet within a given transmissive zone unless otherwise approved by the executive director. Screen lengths exceeding ten (10) feet may be installed in groundwater recovery or injection wells to optimize the groundwater remediation process in accordance with standard engineering practice.

7. The intake portion of a well shall be designed and constructed so as to allow sufficient water flow into the well for sampling purposes and minimize the passage of formation materials into the well during pumping. The intake portion of a well shall consist of commercially manufactured stainless steel or PTFE screen or approved alternate material. The annular space between the screen and the borehole shall be filled with clean siliceous granular material (i.e., filter pack) that has a proper size gradation to provide mechanical retention of the formation sand and silt. The well screen slot size shall be compatible

with the filter pack size as determined by sieve analysis data. The filter pack should extend no more than three (3) feet above the well screen. A silt trap, no greater than one (1) foot in length, may be added to the bottom of the well screen to collect any silt that may enter the well. The bottom of the well casing shall be capped with PTFE or stainless steel or approved alternate material.

Groundwater recovery and injection wells shall be designed in accordance with standard engineering practice to ensure adequate well production and accommodate ancillary equipment. Silt traps exceeding one (1) foot may be utilized to accommodate ancillary equipment. Well heads shall be fitted with mechanical wellseals, or equivalent, to prevent entry of surface water or debris.

8. A minimum of two (2) feet of pellet or granular bentonite shall immediately overlie the filter pack in the annular space between the well casing and borehole. Where the saturated zone extends above the filter pack, pellet or granular bentonite shall be used to seal the annulus. The bentonite shall be allowed to settle and hydrate for a sufficient amount of time prior to placement of grout in the annular space. Above the minimum two (2) foot thick bentonite seal, the annular space shall be sealed with a cement/bentonite grout mixture. The grout shall be placed in the annular space by means of a tremie pipe or pressure grouting methods equivalent to tremie grouting standards.

   The cement/bentonite grout mixture or TCEQ approved alternative grout mixture shall fill the annular space to within two (2) feet of the surface. A suitable amount of time shall be allowed for settling to occur. The annular space shall be sealed with concrete, blending into a cement apron at the surface that extends at least two (2) feet from the outer edge of the monitor well for above ground completions. Alternative annular space seal material may be proposed with justification and must be approved by the executive director prior to installation.

   In cases where flush to ground completions are unavoidable, a protective structure such as a utility vault or meter box should be installed around the well casing and the concrete pad design should prevent infiltration of water into the vault. In addition, the following requirements must also be met 1) the well/cap juncture is watertight; 2) the bond between the cement surface seal and the protective structure is watertight; and 3) the protective structure with a steel lid or manhole cover has a rubber seal or gasket.

9. Water added as a drilling fluid to a well shall contain no bacteriological or chemical constituents that could interfere with the formation or with the chemical constituents being monitored. For groundwater recovery and injection wells, drilling fluids containing freshwater and treatment agents may be utilized in accordance with standard engineering practice to facilitate proper well installation. In these cases, the water and agents added should be chemically analyzed to evaluate their potential impact on in-situ water quality and to assess the potential for formation damage. All such additives shall be removed to the extent practicable during well development.

10. Upon completion of installation of a well, the well must be developed to remove any fluids used during well drilling and to remove fines from the formation to provide a particulate free discharge to the extent achievable by accepted completion methods and by commercially available well screens. Development

shall be accomplished by reversing flow direction, surging the well or by air lift procedures. No fluids other than formation water shall be added during development of a well unless the aquifer to be screened is a low yielding water bearing aquifer. In these cases, the water to be added should be chemically analyzed to evaluate its potential impact on in-situ water quality, and to assess the potential for formation damage.

For recovery and injection wells, well development methods may be utilized in accordance with standard engineering practice to remove fines and maximize well efficiency and specific capacity. Addition of freshwater and treatment agents may be utilized during well development or re development to remove drilling fluids, inorganic scale or bacterial slime. In these cases, the water and agents added should be chemically analyzed to evaluate their potential impact on in-situ water quality and to assess the potential for formation damage. All such additives shall be removed to the extent practicable during well development.

11. Each well shall be secured and/or designed to maintain the integrity of the well borehole and groundwater.

12. The above ground portion of the well must be protected by bumper guards and/ or metal outer casing protection when wells are located in traffic areas or outside the secured plant area.

13. The attached **Table of Well Construction Details (Item 13)** is to be completed or updated for each well installed and kept on site. Items in the table that require a yes or no answer indicate diagrams plans, or procedures that shall be kept on site and made available to inspection. The completed table and other records shall include all the following information:

    - name/number of well (well designation);
    - intended use of the well(sampling, recovery, etc.);
    - date/time of construction;
    - drilling method and drilling fluid used;
    - well location (+ 0.5 ft.);
    - bore hole diameter and well casing diameter;
    - well depth (+ 0.1 ft.);
    - drilling and lithologic logs;
    - depth to first saturated zone;
    - casing materials;
    - screen materials and design;
    - casing and screen joint type;
    - screen slot size/length;

- filter pack material/size;
- filter pack volume (how many bags, buckets, etc.);
- filter pack placement method;
- sealant materials;
- sealant volume (how many bags, buckets, etc.);
- sealant placement method;
- surface seal design/construction;
- well development procedure;
- type of protective well cap;
- ground surface elevation (+ 0.01 ft. MSL);
- top of casing elevation (+ 0.01 ft. MSL); and,
- detailed drawing of well (include dimensions).

14. Construction or plugging and abandonment of each well shall be completed in accordance with the requirements of 16 TAC Chapter 76 and must be reported/ certified to the TCEQ that such proper construction or plugging and abandonment has occurred following installation or plugging and abandonment. Well completion logs for each newly installed or replaced well shall be included with the report. The certification shall be prepared by a qualified geologist or geotechnical engineer. Each well certification shall be accompanied by a certification report, including an accurate log of the soil boring, which thoroughly describes and depicts the location, elevations, material specifications, construction details, and soil conditions encountered in the boring for the well. A copy of the certification and certification report shall be kept on site, and a second copy shall be submitted to the executive director.

15. The well number must be clearly marked and maintained on each well at the site.

16. The elevation of the top of each well casing must be measured in feet above mean sea level to the nearest 0.01 foot.

17. Wells must be replaced at any time the well integrity or materials of construction or well placement no longer enable the well to yield samples representative of groundwater quality.

18. Soil test borings shall be plugged and wells removed from service with a cement/bentonite grout mixture so as to prevent the preferential migration of fluids in the area of the borehole. Certification of each plugging shall be reported in accordance with Provision 14. The plugging of wells shall be in accordance with 16 TAC Chapter 76 dealing with Well Drilling, Completion, Capping and Plugging.

19. A well's screened interval shall be appropriately designed and installed to meet the well's specific objective (i.e., either DNAPL, LNAPL, both, or other objective of the well). All wells designed to detect, monitor, or recover DNAPL must be drilled to intercept the bottom confining layer of the aquifer. The screened interval to detect DNAPL should extend from the top of the lower confining layer to above the portion of the aquifer saturated with DNAPL. The screened interval for all wells designed to detect, monitor, or recover LNAPL must extend high enough into the vadose zone to provide for fluctuations in the seasonal water table. In addition, the sandpacks for the recovery or monitoring well's screened interval shall be coarser than surrounding media to ensure the movement of NAPL to the well.

Attachment C - Sampling And Analysis Plan

Introduction and Purpose

This Attachment was prepared for the purpose of providing guidance for the preparation of a Groundwater Sampling and Analysis Plan (SAP) to meet the requirements of 30 Texas Administrative Cod (TAC) 335.163(4) and (5) and also 40 CFR 270.30(j). This guidance is based on the publication, RCRA Groundwater Monitoring: Draft Technical Guidance (TEGD Update) (November 1992, USEPA), and its updates, and is not intended to be rule or policy, or include all acceptable practices.

When preparing the SAP, the applicant may insert copies of areas of the Compliance Plan Application already completed which provides any necessary information for completion of the SAP. The SAP should include the information described in the following sections. When certain sections are not applicable, please provide justification for omission from the SAP.

1. Pre Field Activity
    a. The log book format should be outlined in the SAP and should contain at a minimum:
        - the names of those conducting the sampling event;
        - the purpose and provision(s) of the compliance plan requiring the sampling event;
        - weather conditions at time of sampling;
        - date and time of collection;
        - well identification;
        - integrity of well;
        - monitoring well measurements, including: total well depth; static water level depth; measurement techniques; height of water column; well volume; and, notation of the presence or absence of accumulated silt (including thickness and measurement procedures);
        - notation of the presence or absence of NAPLs (including thickness and detection method);
        - well purging procedures, including equipment, purge volume, pumping rate, and well purge time;
        - sampling methods, including well sampling sequence, sampling equipment and withdrawal procedures;
        - visual and measured water quality parameters required for analysis, such as appearance, pH, conductivity, temperature and turbidity; and,
        - sample preservation and handling procedures, including types of sample bottles, sample identification numbers, preservatives used, and internal temperature of field and shipping containers.
    b. The SAP should reference the Provisions or Tables within the Compliance Plan regarding monitor well designations, parameters to be monitored, and sampling frequency, rather than utilizing detailed lists.
    c. The SAP should include examples of the log book format, chain of custody, and information to be included on the container labels and seals.
    d. The SAP should reference both the Health and Safety Plan, and Field Emergency Contingency Plan. These Plans should be checked to determine if they adequately address health and safety issues that may occur during a sampling event.
2. Prior to Purging Well

a. A. Procedures for evaluating the physical condition and integrity of the well should include:
   - inspecting the casing and cap for cracks, signs of deterioration or tampering;
   - determination if the cap and monitoring well are secure;
   - inspecting the well pad for cracks, or signs of deterioration, erosion, settling, and/or animal and insect burrowing; and,
   - where appropriate, inspect any dedicated equipment for signs of cleanliness, structural integrity and deterioration.

b. Procedures and equipment used for measuring groundwater elevations, well depths, silt accumulation, and Non Aqueous Phase Liquids (NAPLs) should be included in the SAP. Water levels should be measured from the surveyed datum on the top of the well casing, with a precision of ±0.01 foot. If present, accumulated silt and light/dense NAPLs should be measured for thickness.

c. Procedures for monitoring site specific weather conditions at the time of sampling should be incorporated into the SAP, including precipitation (when applicable), temperature, and approximate wind speed and direction.

3. Sampling Preparation Activity

a. Well purging methods:

(1) A sampling contingency plan should be developed for wells which are purged to dryness or purged such that full recovery exceeds two hours. In such instances, samples should be taken as soon as a sufficient volume of groundwater has entered the well to enable the collection of the necessary groundwater samples.

(2) In all instances of purging, the SAP should describe in detail the equipment used (dedicated or non dedicated), purging rate, and the method for determining volume purged.

(3) Although purging and sampling by bailers is acceptable, the EPA recommends the use of dedicated pumping equipment designed for low flow rates.

(4) When utilizing micropurging methods, the purge rate may range between 0.1 to 0.5 liter/minute. During micropurging, drawdown should not exceed 0.1 meter. The applicant should provide justification for any alternate sampling procedure. The SAP should also specify the well screen interval at which the pump intake is placed and a copy of the boring log for each well utilizing micropurging. In line measurements of redox, dissolved O2 and turbidity during purging of groundwater should stabilize within 10% over at least two measurements prior to sampling.

b. Field filtering of groundwater samples should not be conducted unless the applicant has provided a justification and field filtration is approved by the TCEQ. If samples are field filtered, a 10 micron filter should be used while still fulfilling the data quality objectives for the groundwater monitoring program.

c. The container type, size, and labeling method for each procedure performed should be referenced and/or tabulated in the SAP.

d. Sample blanks, field blanks, trip blanks and split sampling procedures, including frequency and preservation should be specified in the SAP as quality control checks for each sampling event. The preparation, analysis,

and evaluation of replicates, duplicates and spikes should also be included.

4. Well Sampling
   a. Well sampling equipment, collection procedures, and sampling sequence of wells, should be specified in the SAP. The SAP should include sampling equipment that is constructed of inert material, which should not alter analyte concentration due to loss of analyte via absorption, or gain via desorption, degradation or corrosion.
   b. Field QA/QC and sample preservation methods used to control pH, chemical addition and refrigeration of samples should be described in the SAP and follow the methods described in the current editions of EPA Report SW 846, "Test Methods for Evaluating Solid Waste" and American Society for Testing and Materials (ASTM) Standard Test Methods or other methods accepted by the TCEQ. The SAP should indicate that chemical preservatives are to be added to samples in the field and not in the laboratory. The SAP should indicate that coolants used for refrigerating samples need to be contained (e.g. blue ice).
   c. Procedures for sampling inorganics and volatile/semi volatile organics should be described in the SAP and follow the methods of SW 846 and ASTM or other methods accepted by the TCEQ.
5. Post Sampling Activity
   a. Decontamination procedures should be included in the SAP when dedicated equipment is not used for purging and sampling, or when dedicated equipment is stored outside the well. The procedures should include disassembly, cleaning of equipment, packaging and storage of equipment when not in use.
   b. Analytical methods and holding times should be tabulated in the SAP in accordance with SW 846 and ASTM or other methods accepted by the TCEQ.
   c. Chain of custody and shipping procedures should be described and intended to prevent misidentification of samples, to identify and prevent tampering of the samples during shipping and storage, and allow easy tracking of the shipment from the field to final analyses. A Chain of Custody Form should accompany each sample shipment and include the following information:
      - sample identification number;
      - signature of collector;
      - date and time of collection;
      - sample type (e.g. groundwater);
      - identification of sampling point (well);
      - number of containers;
      - parameters requested for analysis;
      - preservatives used;
      - signature(s) of person(s) involved in the chain of possession;
      - inclusive dates and time of possession;
      - internal temperature of shipping container when samples were sealed into the container for shipping; and,
      - internal temperature of container upon opening in the laboratory.

Samples should be shipped in coolers or similar containers designed to keep samples at a constant 4˚C and prevent breakage. Containers used for sample shipment should be

sealed with the seal signed and dated by the sampler.

d. Disposal methods of contaminated equipment, wash water and purged groundwater should be described.

e. Laboratory QA/QC procedures should include control samples as defined in Chapter I of SW 846. An appropriate statistical method/procedure should be used to monitor and document performance and to implement an effective program to resolve testing problems (instrument maintenance). Data from the control samples (i.e. spiked samples, duplicates and blanks) should be used as a measure of performance or as an indicator of potential source of cross contamination (i.e. from instrumentation). QA/QC documentation for reporting values should be tabulated on laboratory data sheet and include: target analyte; unit of measure (e.g. ppm); method analyses; and, time/dates of sample collection and analyses.

XII. Hazardous Waste Permit Application Fee

Provide all Part B responsive information in Appendix XII. When preparing the physical format organize your submittal using the Format of Hazardous Waste permit Application and Instructions.

In accordance with 30 TAC 305.53, complete Tables XII.A. - Hazardous Waste Units (For Application Fee Calculations) and XII.B. - Hazardous Waste Permit Application Fee Worksheet. Use the following information in calculating your fee. The application fee will be non-refundable once an initial review of the application has been completed. 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 necessary. **Tables XII.A and XII.B are included in Appendix XII.**

A. The minimum permit application fee for a permit or a permit renewal for each hazardous waste facility to be used for Storage, Processing, Disposal, or Closure/Post-Closure Care (disposal has already occurred) of hazardous waste shall be $2,000, plus notice fee, and the maximum shall be $50,000, calculated according to these instructions:

1. Process Analysis - $1,000.00.

2. Management/Facility Analysis - $500.00.

3. A facility unit(s) analysis of $500 per unit is charged for the following:

   a. each cell of a landfill (note that multiple cells that are identical in type and use are subject to a single $500 fee);

   b. tanks and container storage areas (note that multiple tanks and container storage areas that are identical in type and use are subject to a single $500 fee)

   c. identical in type and use means the following:
      (1) made of the same material and same design;
      (2) the same size/capacity within + 10%;
      (3) store the same waste (as identified by USEPA hazardous waste number - 40 CFR 261 Subparts C & D); and
      (4) have the same management characteristics (e.g., storage only).

   d. Each incinerator, boiler/industrial furnace unit, surface impoundment, waste pile, land treatment unit, drip pad, miscellaneous unit, or containment building.

4. Site Evaluation - $100 per acre of surface used for hazardous waste management up to 300 acres. No additional fee thereafter. This shall be calculated as any acreage which will be permitted to manage hazardous waste. This shall include, for example, the entire area within the secondary containment of a tank farm, the area within a fence that surrounds individual units (other than the facility fence), or the area defined by the toe of the dike surrounding a landfill or impoundment, etc.

5. An applicant shall also include with each initial application a fee of $50 to be applied toward the cost of providing the required notice. An additional notice

fee of $15 is required with each application for renewal.

B. The application fee for a major amendment or a Class 2 or 3 modification to a hazardous waste permit for operation, closure, or post-closure care is subject to the fees listed below:

1. A management/facility analysis fee of $500.

2. The notice fee is $50.

3. If a unit is added or a unit area is expanded for any purpose, $100 per additional acre is assessed, until the total additional acreage reaches 300 acres.

4. If one or more of the following reports are added or are significantly revised, the process analysis fee of $1000 is assessed:

   a. waste analysis plan;

   b. site-specific or regional geology report;

   c. site-specific or regional geohydrology report;

   d. groundwater and/or unsaturated zone monitoring;

   e. closure and/or post-closure care plan; or

   f. RCRA Facility Assessments (RFAs), or corrective action reports;

   g. Alternate Concentration Limit (ACL) demonstration or Development of Protective Concentration Limits (PCLs);

   h. Regulated Unit Facility Assessment, Corrective Action (CA) work plans or reports for Regulated Units; and/or

   i. RCRA Facility Investigation (RFI)/Affected Property Assessment (APA), Remedy Selection, Corrective Measure Implementation (CMI)/Remedial Action Plan for solid waste management units, and/or areas of concern;

   j. Facility Operations Area (FOA).

5. A unit analysis fee of $500 per unit is assessed if any of the following occur:

   a. if a unit is added (even if identical to units already in place, using the criteria discussed in A.3 above);

   b. if there are design changes in an existing unit; or

   c. if a unit status changes from closure to post-closure care;

   d. Changes in the number, location, depth, or design of wells approved in compliance plan or a permit (unless it is a replacement well);

   e. Changes in point of compliance and compliance monitoring program;

   f. Changes in Groundwater Protection Standards, indicator parameters, Alternate Concentration Limits or Protective Concentration Limits; and/or

   g. Changes in corrective action program.

C. The application fee for a minor amendment, a Class 1, or a Class 1^1 modification of a

hazardous waste permit is $100 plus the notice fee of $50.

XIII. Confidential Material

Any information submitted in this application which is deemed confidential shall be provided in this Section as a separate collective document and clearly labeled **CONFIDENTIAL**. Refer to Part B instructions (page 9) for further information.

Attachment F
New Sampling & Analysis Plan

Sampling and Analysis Plan
Pasadena Refining System, Inc.
Pasadena, Harris County, Texas

EPA ID # TXD008091290
Compliance Plan No. CP-50112
SWR 30311

Prepared for:
Pasadena Refining System, Inc. (PRSI)
111 Red Bluff Road
Pasadena, Texas 77506

Prepared by:

800 Gessner, Suite 1200
Houston, Texas 77024

May 2025

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Tables

Table 1. Stabilization Criteria
Table 2. Sample Containers, Preservation, and Holding Times

1.0 Introduction

The purpose of this groundwater Sampling and Analysis Plan (SAP) is to describe the groundwater sampling techniques and procedures to be utilized to meet the requirements of Pasadena Refining System Incorporated's (PRSI) Hazardous Waste Permit No. HW-50112 for Compliance and Corrective Action Monitoring. The goal of these protocols is to provide a basis for consistent, quality groundwater data. The sections included herein describe the procedures that will be used for pre-field activities, well purging, sample collections, sample preservations, analytical methods, chain-of-custody procedures, and the field and laboratory quality assurance programs.

This SAP reflects the groundwater monitoring programs specified in PRSI's Permit and Compliance Plans. Tables and documents in **Appendix A** are not considered part of the SAP but supplements. Therefore, these attachments may be changed or updated as necessary without approval from the Texas Commission on Environmental Quality (TCEQ).

Sampling will be conducted as outlined in the schedule included in Compliance Plan (CP) Table VIII included in the facility permit. Groundwater samples will be analyzed for the analytical constituents listed in CP Table III, IIIA, IV, and IVA as appropriate.

1.1 Pre-field Activities

Prior to beginning the sampling events the following pre-field safety related activities will be completed:

- The project Health and Safety Plan (HASP) (which includes the Field Emergency Contingency Plan) will be reviewed;
- Job Safety Analysis / Task Hazard Assessment forms shall be reviewed and signed; Consultation with applicable unit control rooms and receipt of permits to work if applicable; and
- A safety tailgate meeting for all field team members will be conducted onsite.

2.0 Pre-Sampling Activities

These procedures were developed to meet the requirements of 30 Texas Administrative Code (TAC) 335.163(4) and (5) and also 40 CFR 270.30(j). A list of wells to be monitored for comparison to protective concentration levels (PCLs) is included in the Permit as CP Table V.

2.1 Health and Safety

Work will be conducted per the PRSI's general health and safety requirements and will be outlined in a health and safety plan which will be reviewed annually. The health and safety plan will outline personal protective equipment, common hazards and mitigations, emergency procedures, air monitoring and respiratory protection among other items. The site Contingency Plan will be referenced in the Health and Safety Plan and provided to all personnel for review prior to arriving at the site and a copy will be readily available while work is performed.

2.2 Monitor Well Inspection

Upon arrival at the monitor well locations, the sampler will conduct a survey of the physical condition and integrity of each well. The data should be recorded on the Monitor Well Inspection Record form or equivalent. At minimum this information must include:

- inspecting the casing and cap for cracks, signs of deterioration or tampering;
- determination if the cap and monitoring well are secure;
- inspecting the well pad for cracks, or signs of deterioration, erosion, settling, and/or animal and insect burrowing; and,
- where appropriate, inspect any dedicated equipment for signs of cleanliness, structural integrity and deterioration.

In the case of extreme damage (i.e., well run over, signs of tampering) to the well the sampler will communicate the current condition and need for repairs upline immediately so coordination of these repairs.

2.3 Equipment Calibrations

Field equipment will be tested according to the manufacturer's instructions for daily testing prior to purging and sampling activities and whenever the equipment has not been used for more than two hours. If based on the equipment manual calibration is necessary, it will be completed following the manual. Daily testing and calibration data will be recorded on the I*nstrument Calibration Record* form or equivalent.

2.4 Water Level Measurements

Water level measurement will be made and recorded to within 0.01 feet prior to purging and sampling utilizing an interface probe. Measurements are taken relative to the top of the well casing. The elevation of the top of the well casing for each well has been established relative to a National Geodetic Benchmark and the point on the casing where the elevation has been

determined is clearly marked. The *Monitor Well Purging and Sampling Record* or equivalent form will be used to record the following information at minimum:

- Date;
- Time;
- Weather Conditions;
- Monitor Well ID;
- Depth to LNAPL, if applicable, from top of casing (TOC);
- Depth to water from TOC;
- Total well depth from TOC;
- Silt accumulation at bottom of well if noted; and
- Monitor well casing diameter.

A record will be kept of the elevation of the top of each well casing the facility shall compare old and new elevations from previously surveyed wells and determine a frequency of surveying not to exceed five (5) year intervals.

3.0 Monitor Well Sampling Procedures

3.1 Monitor Well Purging

All monitor wells are purged prior to sampling utilizing the low flow purging/sampling method. This method minimizes volatilization of constituents, yields repeatable, representative samples of the well contents, minimizes mixing of stagnant casing water with formation water, reduces volume of purged water requiring management. At wells with well-dedicated tubing, the tubing will be checked for discoloration or degradation. Tubing should be replaced when discolored or degraded.

Low flow purging will be conducted using a peristaltic or submersible pump with ability for low purge rates, utilizing well-dedicated or disposable polyethylene tubing. Groundwater parameters will be measured using meters within a flow through cell as appropriate. To minimize disturbance to the water column in the well and surrounding formation, the tubing or pump inlet will be slowly lowered to the middle of the screened interval of the well. Following tubing or pump installation, a water level probe will be lowered into the well. The pump will be activated, and the water level will be monitored. The pumping rate will be adjusted until the depth to water has stabilized (i.e., the pumping rate is equivalent to the recharge rate of formation to the well). Pumping rates should be on the order of 100 to 500 milliliters per minute (ml/min) and should not create more than 0.1 m of drawdown within the well.

As the well is purged, the water level in the well should remain steady. A flow-through cell will be utilized to monitor pH, temperature, dissolved oxygen (DO), specific conductance (SC), and oxidation/reduction potential (ORP). When available turbidity will be measured within the flow through cell but if needed it can be measured outside the cell using a separate turbidity meter. A minimum of 500 ml of water will be purged between recording water quality readings. Purging will continue until aquifer water quality parameters have generally stabilized over three consecutive readings. Stabilization is defined to within the variances outlined on **Table 1** below.

Table 1. Stabilization Criteria

Parameter	Stabilization
pH	+/- 0.1 st. units
DO	+/- 0.3 mg/L
ORP	+/- 10 millivolts
Turbidity	+/- 10% or <10 ntu
SC	+/- 3 %
Temperature	+/- 3 %

At minimum pH and SC along with either Turbidity or DO should be stabilized. DO and Turbidity usually require the longest purge times for stabilization.

3.2 Sample Collection, Management, and Documentation

Prior to sampling, each sample container should be affixed with a self-adhesive, waterproof label that indicates the sample name, the analyses to be performed, parameters to be analyzed (as necessary), and the type of preservative to be used. Sampling personnel will fill out the date collected, time collected, and sampler's name at the time of sampling. To prevent cross contamination of samples, the sampler will don new gloves prior to opening sample containers after purging the well (i.e. once per well location unless otherwise needed).

3.2.1 Sample Collection

After stabilization has been reached and purging completed, the purge tubing will be disconnected from the flow through cell and the groundwater sample collected directly into the laboratory supplied containers. As during purging, the pump inlet should be located in the middle of the screened interval of the well during sampling. Samples collected for analysis of volatile constituents will be collected at about 100 ml/min to avoid loss of volatile constituents. Subsequently, samples collected for other analyses will be collected at about 300 ml/min.

Sample containers will be filled in the following order: volatile organic compounds (VOCs), semi-volatile organic compounds, then any inorganic compounds (e.g., metals). Samples collected for analysis of volatile constituents will be filled completely and sealed with no headspace (air space or air bubbles) in the sealed vials.

3.2.2 Sample Management

Filled sample containers will be sealed and placed into a cooler maintained at 4°C. Care will be taken to keep the coolers at this temperature for the duration of sampling and transportation of the samples to the laboratory.

All groundwater samples will be handled under chain-of-custody procedures. A sample chain-of-custody form is included in **Appendix A**. A Chain-of-Custody form will accompany each sample shipment. It is preferred that samples are either picked up by the laboratory from the site or driven to the site. If shipping is needed (i.e., out of town laboratory), samples will be shipped in coolers or similar containers designed to keep samples at a constant 4°C and properly package to prevent breakage. Coolers or similar containers used for sample shipment will be sealed with a custody seal, signed and dated by the sampler.

All sample containers will have the EPA SW-846 method-specific preservatives added at the laboratory prior to shipment to the site.

Groundwater samples will be analyzed for the analytical constituents listed in CP Table III, IIIA, IV, and IVA as appropriate. A table presenting analytical methods, holding times, preservation methods and containers is included as **Table 2**.

3.2.3 Sample Documentation

The following information will be recorded during the sampling event:

- the names of those conducting the sampling event;
- weather conditions at time of sampling;
- well identification;
- integrity of well;
- monitoring well measurements, including total well depth, static water level depth, measurement techniques, height of water column, well volume, and notation of the presence or absence of accumulated silt (including thickness and measurement procedures);
- notation of the presence or absence of free product (including depth to product, product thickness, and detection method);
- well purging procedures, including equipment, purge volume, pumping rate, and well purge time;
- sampling methods, including well sampling sequence, sampling equipment and withdrawal procedures;
- date and time of sample collection;
- visual and measured water quality parameters required for analysis, such as appearance, pH, conductivity, temperature and turbidity; and
- sample preservation and handling procedures, including types of sample bottles, sample identification numbers, preservatives used, and internal temperature of field and shipping containers.

Information may be recorded in a bound logbook or on forms approved by the facility. An example form is included in **Appendix A**.

4.0 Decontamination Procedures

If dedicated or disposable sampling equipment are used decontamination with be limited to water level meters, interface probes, meters and flow through cells. Reusable equipment will be cleaned using a non-phosphorus detergent mixed with distilled water and then triple rinsed with distilled water. Equipment will be dried with a paper towel. Submersible pumps will be decontaminated per the manufacturer's recommendations and purged with a minimum of 1 gallon of clean distilled water before reuse.

The sampling team will don nitrile, latex or similar gloves for well monitoring, purging, and sampling activities. Used gloves, paper towels, and disposable tubing will be containerized in a dedicated trash bag and disposed at the facility as directed by operations.

Purge water will be recycled into the plant oil-water separator system as directed by operations.

5.0 Quality Assurance/Quality Control (QA/QC)

To ensure the quality of the analytical data QA/QC protocols will be employed by the field team and laboratory. This includes the collection of blank and duplicate samples by the field team and analysis of matrix spike and other quality control samples by the laboratory.

The laboratory will provide VOC trips blanks that will travel with the sample containers and coolers throughout the sampling event and will be sent to the laboratory with the well samples. The trip blanks will be analyzed for the same VOCs as the groundwater samples. This can identify potential cross contamination of the samples.

The field team will collect a duplicate monitor well sample for every ten wells sampled or a minimum of one per event. When collecting a duplicate sample, the sampler will collect the VOC sample for the parent sample, then the VOC sample for the duplicate followed by the SVOC for the parent then the duplicate and so on. Collecting each method immediately following the parent sample minimizes potential changes ensures that VOC samples are collected first for both the parent and the duplicate.

When using well-dedicated equipment an equipment blank will not be collected. If a submersible pump is used, one equipment blank will be collected for each day of sampling. The equipment blank will be collected by running distilled water through new tubing and the decontaminated pump into sample containers.

One field blank will be collected for each unit or AOC's sampling event. The field blank will be collected by filling sample containers with distilled water while at a sample location.

All quality control samples will be managed in the same manner as groundwater samples and kept with the groundwater samples.

The analytical laboratory will follow the standard QA/QC procedures including control samples as defined in SW 826. The laboratory will include a TRRP checklist in the laboratory report. Data will be reviewed per TRRP-13 prior to determination if it is usable data and if any protective concentration levels (PCLs) are exceeded.

Table 2. Sample Containers, Preservation, and Holding Times

Parameter	Method*	Container Sample	Sample Size	Preservation	Max. Holding Time
pH	SW-846 9040/ EPA 150.1	Field	-	-	-
Specific Conductance	SW-846 9050/ EPA 120.1	Field	-	-	-
Dissolved Oxygen	EPA 360.1	Field	-	-	-
Oxidation/ Reduction Potential	SM 2580B	Field	-	-	-
Temperature	EPA 170.1	Field	-	-	-
Volatile Organics	8260	3 x VOA Vials	40 ml each	HCL to pH < 2, 4° C	14 days
Semi-Volatile Organics	8270	2 x Amber Glass	1000 ml each	4° C	7 days until extraction / 40 days until analysis
Dissolved Metals, Total Metals	6020	Polyethylene	500 ml	HNO_3 to pH < 2, 4° C	28 days for mercury, 6 months for other metals

EPA: Method for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020 (Revised March 1983).

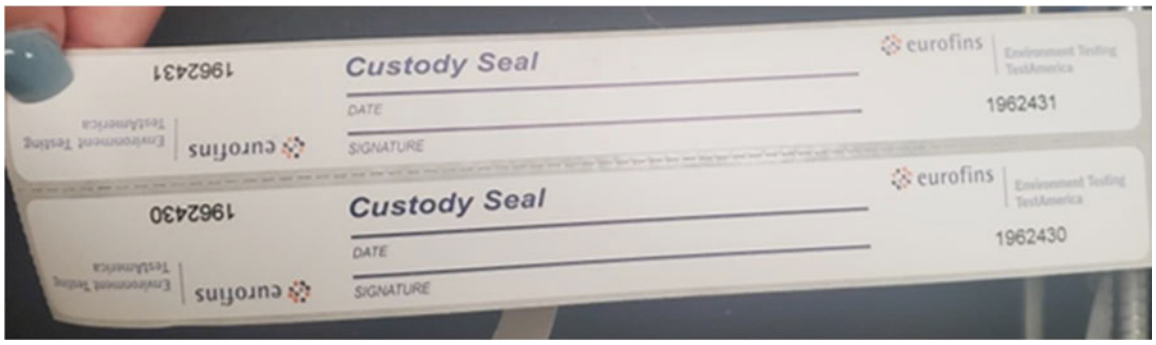
SM: Standard Methods for the Examination of Water and Wastewater 2nd Edition.

SW-846: Test Methods for Evaluating Solid Waste Physical/Chemical Methods, 3rd Edition and promulgated updates.

*Note: Equivalent EPA promulgated methods may be used as alternatives to methods listed above.

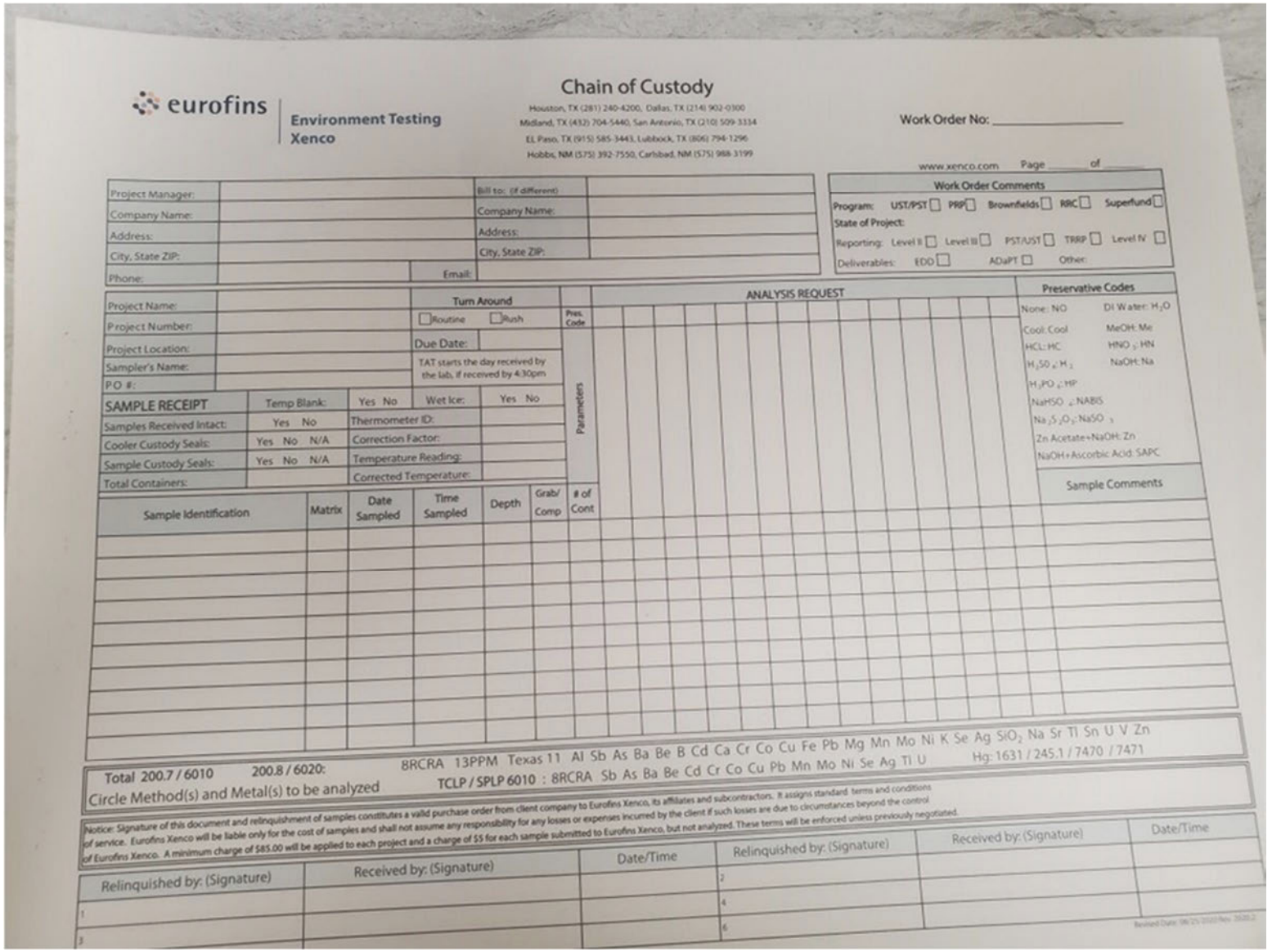
Appendix A
EXAMPLES Chain-Of-Custody Form, Sample Custody Seal, Sample Jar Label, and Monitoring Well Sampling Data Sheet

Custody Seal



Sample Jar Label

Chain of Custody



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Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Order No: _____

www.xenco.com Page _____ of _____

Project Manager:		Bill to: (if different)	
Company Name:		Company Name:	
Address:		Address:	
City, State ZIP:		City, State ZIP:	
Phone:	Email:		

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:		Turn Around	
Project Number:		☐ Routine ☐ Rush	
Project Location:		Due Date:	
Sampler's Name:		TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT	Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:		
Cooler Custody Seals:	Yes No N/A	Correction Factor:		
Sample Custody Seals:	Yes No N/A	Temperature Reading:		
Total Containers:		Corrected Temperature:		

ANALYSIS REQUEST

Pres. Code

Parameters

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Hg: 1631 / 245.1 / 7470 / 7471

Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of $85.00 will be applied to each project and a charge of $5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			2		
3			4		
			6		

Revised Date: 08/25/2020 Rev: 2020.2

Monitoring Well Sampling Data Sheet

AECOM

Low-Flow Sampling Log

Well ID:		**Date:**	
Total Depth:		**Project:**	
Depth to Water:		**Sample Team:**	
Water Column:		**Weather Conditions:**	
Depth to Product		LNAPL or DNAPL	
Time:		**Flow Rate:**	mL/min.

Well Condition: Good / Needs Repairs

Explain: _____

Parameter Readings:

Time	DTW (ft)	Cum. Purge Vol. (mL)	Temp. (°C) ± 1°C	Cond. (mS/cm) ± 3%	DO (mg/L) ± 10%	pH ± 0.1	ORP (mV) ± 10	Turbidity (NTU) ± 10%

Final Depth to Water: _____ **Total Drawdown:** _____

Notes (well integrity, silt accumulation, sample appearance) :

_____

_____

Sample Information:

Sample Time:		**Containers:**	
Sample ID:			

Signature: _____ Date: _____

Attachment G
Revised Cost Estimate

Redline Cost Estimate

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
Moat		
1. Annual Sampling and Analysis Cost:		
A. Background Wells		
(1) Number of wells	1	
(2) Sample analysis cost per well	$195.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$390.00	
B. Point of Compliance Wells		
(1) Number of wells	4	
2) Sample analysis cost per well	$195.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$1,560.00	
C. Recovery Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	0	
D. Corrective Action Observation Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
E. Point of Exposure Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
(4) Sampling cost (1 x 2 x 3)	$0.00	
F. Supplemental Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
G. Field Quality Control Sampling		
(1) Number of wells	3	
(2) Sample analysis cost per well	$195.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$1,170.00	
H. Sampling Analysis Cost (1.A+1.B+1.C+1.D+1.E+1.G)	$3,120.00	
2. Sampling Labor Cost:		
A. Hours of sampling per well	2.5	hrs/well
B. Number of sampling technicians per well	1	/yr
C. Charge per hour	$80.00	$/hr
D. Total number of wells to be sampled annually		
E. Total number of wells sampled semi-annually	5	
F. Total number of wells sampled quarterly		
G. Total number of wells sampled monthly		
H. Total number of wells sampled per year (2D) + (2E x 2) + (2F x 4) + (2G x 12)	10	
I. Sampling Labor Cost (2A x 2B x 2C x 2H)	$2,000.00	
***Annual Groundwater Monitoring Cost**	$5,120.00	
3. Well Installation (typical cost):		
A. Monitor well installation cost per well	$0.00	$/well
B. Number of monitor wells to be installed	0	
C. Cost of monitor well system (A x B)	$0.00	
D. Recovery well installation cost per well	$0.00	$/well

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
E. Number of Recovery Wells to be installed	0	
F. Cost of Recovery well system (D x E)	$0.00	
***Total Well Installation Cost (3C + 3F)**	0	
4. Administrative Cost:		
A. Annual cost for record-keeping and report preparation	$5,000.00	
***Annual Administrative Cost (4A)**	$5,000.00	
5. Inspection and Maintenance Cost for the Monitoring Program:		
A. Operator's time (hours) on-site for inspections and maintenance per year	$5.00	$/hr
B. Charge or salary per hour	$65.00	$/hr
C. Annual cost of labor (4A x 4B)	$325.00	$/hr
D. Replacement of parts and equipment per year	$150.00	$/hr
***Annual Inspections / Maintenance Cost for the Groundwater Monitoring Program (5C + 5D)**	$475.00	

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
Ponds WM Area - Stormwater Pond & Bauxite Pond		
1. Annual Sampling and Analysis Cost:		
A. Background Wells		
(1) Number of wells	2	
(2) Sample analysis cost per well	$155.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$620.00	
B. Point of Compliance Wells		
(1) Number of wells	9	
2) Sample analysis cost per well	$155.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$2,790.00	
C. Recovery Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	0	
D. Corrective Action Observation Wells		
(1) Number of wells	9	
(2) Sample analysis cost per well	$155.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$2,790.00	
E. Point of Exposure Wells		
(1) Number of wells	0	

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
F. Supplemental Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
G. Field Quality Control Sampling		
(1) Number of wells	3	
(2) Sample analysis cost per well	$155.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$930.00	
H. Sampling Analysis Cost (1.A+1.B+1.C+1.D+1.E+1.G)	$7,130.00	
2. Sampling Labor Cost:		
A. Hours of sampling per well	2.5	hrs/well
B. Number of sampling technicians per well	1	/yr
C. Charge per hour	$80.00	$/hr
D. Total number of wells to be sampled annually		
E. Total number of wells sampled semi-annually	20	
F. Total number of wells sampled quarterly		
G. Total number of wells sampled monthly		
H. Total number of wells sampled per year (2D) + (2E x 2) + (2F x 4) + (2G x 12)	40	
I. Sampling Labor Cost (2A x 2B x 2C x 2H)	$8,000.00	
***Annual Groundwater Monitoring Cost**	$15,130.00	
3. Well Installation (typical cost):		
A. Monitor well installation cost per well	$0.00	$/well
B. Number of monitor wells to be installed	0	

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
C. Cost of monitor well system (A x B)	$0.00	
D. Recovery well installation cost per well	$0.00	$/well
E. Number of Recovery Wells to be installed	0	
F. Cost of Recovery well system (D x E)	$0.00	
***Total Well Installation Cost (3C + 3F)**	0	
4. Administrative Cost:		
A. Annual cost for record-keeping and report preparation	$10,000.00	
***Annual Administrative Cost (4A)**	$10,000.00	$
5. Inspection and Maintenance Cost for the Monitoring Program:		
A. Operator's time (hours) on-site for inspections and maintenance per year	$20.00	$/hr
B. Charge or salary per hour	$65.00	$/hr
C. Annual cost of labor (4A x 4B)	$1,300.00	$/hr
D. Replacement of parts and equipment per year	$150.00	$/hr
***Annual Inspections / Maintenance Cost for the Groundwater Monitoring Program (5C + 5D)**	$1,450.00	

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
Recovery Wells		
1. Annual Sampling and Analysis Cost:		
A. Background Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
B. Point of Compliance Wells		
(1) Number of wells	0	
2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
C. Recovery Wells		
(1) Number of wells	8	
(2) Sample analysis cost per well	$60.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$960	
D. Corrective Action Observation Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
E. Point of Exposure Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr

Table XI.E.2.e - Groundwater Monitoring Cost Estimate	
(4) Sampling cost (1 x 2 x 3)	$0.00
F. Supplemental Wells	
(1) Number of wells	~~0~~
(2) Sample analysis cost per well	$0.00 $/well
(3) Number of sampling events per year	0 /yr
(4) Sampling cost (1 x 2 x 3)	$0.00
G. Field Quality Control Sampling	
(1) Number of wells	0
(2) Sample analysis cost per well	$0.00 $/well
(3) Number of sampling events per year	0 /yr
(4) Sampling cost (1 x 2 x 3)	$0.00
H. Sampling Analysis Cost (1.A+1.B+1.C+1.D+1.E+1.G)	$960.00
2. Sampling Labor Cost:	
A. Hours of sampling per well	2 hrs/well
B. Number of sampling technicians per well	1 /yr
C. Charge per hour	$80.00 $/hr
D. Total number of wells to be sampled annually	
E. Total number of wells sampled semi-annually	8
F. Total number of wells sampled quarterly	
G. Total number of wells sampled monthly	
H. Total number of wells sampled per year (2D) + (2E x 2) + (2F x 4) + (2G x 12)	16
I. Sampling Labor Cost (2A x 2B x 2C x 2H)	$2,560.00
***Annual Groundwater Monitoring Cost**	$3,520.00
3. Well Installation (typical cost):	
A. Monitor well installation cost per well	$0.00 $/well
B. Number of monitor wells to be installed	0
C. Cost of monitor well system (A x B)	$0.00
D. Recovery well installation cost per well	$0.00 $/well

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
E. Number of Recovery Wells to be installed	0	
F. Cost of Recovery well system (D x E)	$0.00	
***Total Well Installation Cost (3C + 3F)**	0	
4. Administrative Cost:		
A. Annual cost for record-keeping and report preparation	$0.00	
***Annual Administrative Cost (4A)**	$0.00	$
5. Inspection and Maintenance Cost for the Monitoring Program:		
A. Operator's time (hours) on-site for inspections and maintenance per year	$0.00	$/hr
B. Charge or salary per hour	$50.00	$/hr
C. Annual cost of labor (4A x 4B)	$0.00	$/hr
D. Replacement of parts and equipment per year	$0.00	$/hr
***Annual Inspections / Maintenance Cost for the Groundwater Monitoring Program (5C + 5D)**	$0.00	

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
Groundwater Region 7		
1. Annual Sampling and Analysis Cost:		
A. Background Wells		
(1) Number of wells		
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
B. Point of Compliance Wells		
(1) Number of wells	0	
2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
C. Recovery Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	0	
D. Corrective Action Observation Wells		
(1) Number of wells	3	
(2) Sample analysis cost per well	$195.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$1,170.00	
E. Point of Exposure Wells		
(1) Number of wells	4	
(2) Sample analysis cost per well	$195.00	$/well
(3) Number of sampling events per year	2	/yr

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
(4) Sampling cost (1 x 2 x 3)	$1,560.00	
F. Supplemental Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
G. Field Quality Control Sampling		
(1) Number of wells	3	
(2) Sample analysis cost per well	$195.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$1,170.00	
H. Sampling Analysis Cost (1.A+1.B+1.C+1.D+1.E+1.G)	$3,900.00	
2. Sampling Labor Cost:		
A. Hours of sampling per well	2.5	hrs/well
B. Number of sampling technicians per well	1	/yr
C. Charge per hour	$80.00	$/hr
D. Total number of wells to be sampled annually		
E. Total number of wells sampled semi-annually	7	
F. Total number of wells sampled quarterly		
G. Total number of wells sampled monthly		
H. Total number of wells sampled per year (2D) + (2E x 2) + (2F x 4) + (2G x 12)	14	
I. Sampling Labor Cost (2A x 2B x 2C x 2H)	$2,800.00	
***Annual Groundwater Monitoring Cost**	$6,700.00	
3. Well Installation (typical cost):		
A. Monitor well installation cost per well	$0.00	$/well
B. Number of monitor wells to be installed	0	
C. Cost of monitor well system (A x B)	$0.00	
D. Recovery well installation cost per well	$0.00	$/well

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
E. Number of Recovery Wells to be installed	0	
F. Cost of Recovery well system (D x E)	$0.00	
***Total Well Installation Cost (3C + 3F)**	0	
4. Administrative Cost:		
A. Annual cost for record-keeping and report preparation	$7,000.00	
***Annual Administrative Cost (4A)**	$7,000.00	$
5. Inspection and Maintenance Cost for the Monitoring Program:		
A. Operator's time (hours) on-site for inspections and maintenance per year	$7.00	$/hr
B. Charge or salary per hour	$65.00	$/hr
C. Annual cost of labor (4A x 4B)	$455.00	$/hr
D. Replacement of parts and equipment per year	$150.00	$/hr
***Annual Inspections / Maintenance Cost for the Groundwater Monitoring Program (5C + 5D)**	$605.00	

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
Site-Wide PMZ		
1. Annual Sampling and Analysis Cost:		
A. Background Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
B. Point of Compliance Wells		
(1) Number of wells	0	
2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
C. Recovery Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	0	
D. Corrective Action Observation Wells		
(1) Number of wells	14	
(2) Sample analysis cost per well	$195.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$5,460.00	
E. Point of Exposure Wells		
(1) Number of wells	5	
(2) Sample analysis cost per well	$195.00	$/well
(3) Number of sampling events per year	2	/yr

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
(4) Sampling cost (1 x 2 x 3)	$1,950.00	
F. Supplemental Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
G. Field Quality Control Sampling		
(1) Number of wells	3	
(2) Sample analysis cost per well	$195.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$1,170.00	
H. Sampling Analysis Cost (1.A+1.B+1.C+1.D+1.E+1.G)	$8,580.00	
2. Sampling Labor Cost:		
A. Hours of sampling per well	2.5	hrs/well
B. Number of sampling technicians per well	1	/yr
C. Charge per hour	$80.00	$/hr
D. Total number of wells to be sampled annually		
E. Total number of wells sampled semi-annually	22	
F. Total number of wells sampled quarterly		
G. Total number of wells sampled monthly		
H. Total number of wells sampled per year (2D) + (2E x 2) + (2F x 4) + (2G x 12)	44	
I. Sampling Labor Cost (2A x 2B x 2C x 2H)	$8,800.00	
***Annual Groundwater Monitoring Cost**	$17,380.00	
3. Well Installation (typical cost):		
A. Monitor well installation cost per well	$0.00	$/well
B. Number of monitor wells to be installed	0	
C. Cost of monitor well system (A x B)	$0.00	
D. Recovery well installation cost per well	$0.00	$/well

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
E. Number of Recovery Wells to be installed	0	
F. Cost of Recovery well system (D x E)	$0.00	
***Total Well Installation Cost (3C + 3F)**	0	
4. Administrative Cost:		
A. Annual cost for record-keeping and report preparation	$10,000.00	
***Annual Administrative Cost (4A)**	$10,000.00	$
5. Inspection and Maintenance Cost for the Monitoring Program:		
A. Operator's time (hours) on-site for inspections and maintenance per year	$15.00	$/hr
B. Charge or salary per hour	$65.00	$/hr
C. Annual cost of labor (4A x 4B)	$975.00	$/hr
D. Replacement of parts and equipment per year	$150.00	$/hr
***Annual Inspections / Maintenance Cost for the Groundwater Monitoring Program (5C + 5D)**	$1,125.00	

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
West Property		
1. Annual Sampling and Analysis Cost:		
A. Background Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
B. Point of Compliance Wells		
(1) Number of wells	5	
2) Sample analysis cost per well	$525.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$5250.00	
C. Recovery Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	0	
D. Corrective Action Observation Wells		
(1) Number of wells	17	
(2) Sample analysis cost per well	$525.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$17850.00	
E. Point of Exposure Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
(4) Sampling cost (1 x 2 x 3)	$0.00	
F. Supplemental Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
G. Field Quality Control Sampling		
(1) Number of wells	12	
(2) Sample analysis cost per well	$525.00	$/well
(3) Number of sampling events per year	1	/yr
(4) Sampling cost (1 x 2 x 3)	$6,300.00	
H. Sampling Analysis Cost (1.A+1.B+1.C+1.D+1.E+1.G)	$17,850.00	
2. Sampling Labor Cost:		
A. Hours of sampling per well	2.5	hrs/well
B. Number of sampling technicians per well	1	/yr
C. Charge per hour	$80.00	$/hr
D. Total number of wells to be sampled annually		
E. Total number of wells sampled semi-annually	22	
F. Total number of wells sampled quarterly		
G. Total number of wells sampled monthly		
H. Total number of wells sampled per year (2D) + (2E x 2) + (2F x 4) + (2G x 12)	44	
I. Sampling Labor Cost (2A x 2B x 2C x 2H)	$8,800.00	
***Annual Groundwater Monitoring Cost**	$26,650.00	
3. Well Installation (typical cost):		
A. Monitor well installation cost per well	$0.00	$/well
B. Number of monitor wells to be installed	0	
C. Cost of monitor well system (A x B)	$0.00	
D. Recovery well installation cost per well	$0.00	$/well

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
E. Number of Recovery Wells to be installed	0	
F. Cost of Recovery well system (D x E)	$0.00	
***Total Well Installation Cost (3C + 3F)**	0	
4. Administrative Cost:		
A. Annual cost for record-keeping and report preparation	$10000	
***Annual Administrative Cost (4A)**	$10000	$
5. Inspection and Maintenance Cost for the Monitoring Program:		
A. Operator's time (hours) on-site for inspections and maintenance per year	50	$/hr
B. Charge or salary per hour	$50.00	$/hr
C. Annual cost of labor (4A x 4B)	$2500.00	$/hr
D. Replacement of parts and equipment per year	$150.00	$/hr
***Annual Inspections / Maintenance Cost for the Groundwater Monitoring Program (5C + 5D)**	$2650.00	

Table XI.E.3. - Financial Assurance Summary

Ponds WM Area (Stormwater Pond and Bauxite Pond)	
Task	Cost
Annual Off-Site Liquid Treatment / Disposal Cost	$900.00
Annual On-Site Treatment / Disposal Cost	
Annual Inspection / Maintenance / Operation Cost For The Corrective Action Program	$6225.00
Annual Groundwater Monitoring Cost	$15130.00
Annual Administrative Cost	$10000.00
Annual Inspection And Maintenance Cost For The Groundwater Monitoring Program	$1450.00
Annual Sub Total	**$33705.00**
Total Years Used For Calculating Financial Assurance for Corrective Action and/or Compliance Monitoring Program	**30** Years
Remediation Cost (Annual Sub Total x Total Years Used)	$1,011,150.00
On-Site Waste Water Treatment System Capital Cost Total Well Cost	
10% Contingency	$101115.00
Total Cost	$1112265.00
Grand Total Cost (round to nearest $1000)	**$1112000.00**

Table XI.E.3. - Financial Assurance Summary

Groundwater Region 7 Task	Cost
Annual Off-Site Liquid Treatment / Disposal Cost	$3800.00
Annual On-Site Treatment / Disposal Cost	
Annual Inspection / Maintenance / Operation Cost For The Corrective Action Program	$6425.00
Annual Groundwater Monitoring Cost	$6700.00
Annual Administrative Cost	$7000.00
Annual Inspection And Maintenance Cost For The Groundwater Monitoring Program	$605.00
Annual Sub Total	**$24530.00**
Total Years Used For Calculating Financial Assurance for Corrective Action and/or Compliance Monitoring Program	**30** Years
Remediation Cost (Annual Sub Total x Total Years Used)	$735,900.00
On-Site Waste Water Treatment System Capital Cost Total Well Cost	
10% Contingency	$73590.00
Total Cost	$809490.00
Grand Total Cost (round to nearest $1000)	**$809000.00**

Table XI.E.3. - Financial Assurance Summary

Site-Wide PMZ Task	Cost
Annual Off-Site Liquid Treatment / Disposal Cost	$1400.00
Annual On-Site Treatment / Disposal Cost	
Annual Inspection / Maintenance / Operation Cost For The Corrective Action Program	$13850.00
Annual Groundwater Monitoring Cost	$17380.00
Annual Administrative Cost	$10000.00
Annual Inspection And Maintenance Cost For The Groundwater Monitoring Program	$1125.00
Annual Sub Total	**$43755.00**
Total Years Used For Calculating Financial Assurance for Corrective Action and/or Compliance Monitoring Program	**30** Years
Remediation Cost (Annual Sub Total x Total Years Used)	$1312650.00
On-Site Waste Water Treatment System Capital Cost Total Well Cost	
10% Contingency	$131265.00
Total Cost	$1443915.00
Grand Total Cost (round to nearest $1000)	**$1444000.00**

Table XI.E.3. - Financial Assurance Summary

Moat Task	Cost
Annual Off-Site Liquid Treatment / Disposal Cost	
Annual On-Site Treatment / Disposal Cost	
Annual Inspection / Maintenance / Operation Cost For The Corrective Action Program	
Annual Groundwater Monitoring Cost	$5120.00
Annual Administrative Cost	$5000.00
Annual Inspection And Maintenance Cost For The Groundwater Monitoring Program	$475.00
Annual Sub Total	**$10595.00**
Total Years Used For Calculating Financial Assurance for Corrective Action and/or Compliance Monitoring Program	**30** Years
Remediation Cost (Annual Sub Total x Total Years Used)	$317850.00
On-Site Waste Water Treatment System Capital Cost Total Well Cost	
10% Contingency	$31785.00
Total Cost	$349635.00
Grand Total Cost (round to nearest $1000)	**$350000.00**

Table XI.E.3. - Financial Assurance Summary

Recovery Wells Task	Cost
Annual Off-Site Liquid Treatment / Disposal Cost	
Annual On-Site Treatment / Disposal Cost	
Annual Inspection / Maintenance / Operation Cost For The Corrective Action Program	
Annual Groundwater Monitoring Cost	$3520.00
Annual Administrative Cost	
Annual Inspection And Maintenance Cost For The Groundwater Monitoring Program	
Annual Sub Total	**$3520.00**
Total Years Used For Calculating Financial Assurance for Corrective Action and/or Compliance Monitoring Program	**30** Years
Remediation Cost (Annual Sub Total x Total Years Used)	$105600.00
On-Site Waste Water Treatment System Capital Cost Total Well Cost	
10% Contingency	$10560.00
Total Cost	$116160.00
Grand Total Cost (round to nearest $1000)	**$116000.00**

Table XI.E.3. - Financial Assurance Summary

West Property Task	Cost
Annual Off-Site Liquid Treatment / Disposal Cost	
Annual On-Site Treatment / Disposal Cost	
Annual Inspection / Maintenance / Operation Cost For The Corrective Action Program	
Annual Groundwater Monitoring Cost	$26650.00
Annual Administrative Cost	$10000.00
Annual Inspection And Maintenance Cost For The Groundwater Monitoring Program	$2650.00
Annual Sub Total	**$39300.00**
Total Years Used For Calculating Financial Assurance for Corrective Action and/or Compliance Monitoring Program	**30** Years
Remediation Cost (Annual Sub Total x Total Years Used)	$1179000.00
On-Site Waste Water Treatment System Capital Cost Total Well Cost	
10% Contingency	$117900.00
Total Cost	$1296900.00
Grand Total Cost (round to nearest $1000)	**$1297000.00**

Table XI.E.3. - Financial Assurance Summary

Total Costs for all areas subject to RCRA Corrective Action and Compliance Monitoring Programs	
Task	Cost
Annual Off-Site Liquid Treatment / Disposal Cost	$6100.00
Annual On-Site Treatment / Disposal Cost	
Annual Inspection / Maintenance / Operation Cost For The Corrective Action Program	$26500.00
Annual Groundwater Monitoring Cost	$74500.00
Annual Administrative Cost	$42000.00
Annual Inspection And Maintenance Cost For The Groundwater Monitoring Program	$6305.00
Annual Sub Total	**$155405.00**
Total Years Used For Calculating Financial Assurance for Corrective Action and/or Compliance Monitoring Program	**30** Years
Remediation Cost (Annual Sub Total x Total Years Used)	$4662150.00
On-Site Waste Water Treatment System Capital Cost Total Well Cost	
10% Contingency	$466215.00
Total Cost	$5128365.00
Grand Total Cost (round to nearest $1000)	**$5128000.00**

New Table

Clean Copy Revised Cost Estimate

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
Moat		
1. Annual Sampling and Analysis Cost:		
A. Background Wells		
(1) Number of wells	1	
(2) Sample analysis cost per well	$195.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$390.00	
B. Point of Compliance Wells		
(1) Number of wells	4	
2) Sample analysis cost per well	$195.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$1,560.00	
C. Recovery Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	0	
D. Corrective Action Observation Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
E. Point of Exposure Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
(4) Sampling cost (1 x 2 x 3)	$0.00	
F. Supplemental Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
G. Field Quality Control Sampling		
(1) Number of wells	3	
(2) Sample analysis cost per well	$195.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$1,170.00	
H. Sampling Analysis Cost (1.A+1.B+1.C+1.D+1.E+1.G)	$3,120.00	
2. Sampling Labor Cost:		
A. Hours of sampling per well	2.5	hrs/well
B. Number of sampling technicians per well	1	/yr
C. Charge per hour	$80.00	$/hr
D. Total number of wells to be sampled annually		
E. Total number of wells sampled semi-annually	5	
F. Total number of wells sampled quarterly		
G. Total number of wells sampled monthly		
H. Total number of wells sampled per year (2D) + (2E x 2) + (2F x 4) + (2G x 12)	10	
I. Sampling Labor Cost (2A x 2B x 2C x 2H)	$2,000.00	
***Annual Groundwater Monitoring Cost**	$5,120.00	
3. Well Installation (typical cost):		
A. Monitor well installation cost per well	$0.00	$/well
B. Number of monitor wells to be installed	0	
C. Cost of monitor well system (A x B)	$0.00	
D. Recovery well installation cost per well	$0.00	$/well

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
E. Number of Recovery Wells to be installed	0	
F. Cost of Recovery well system (D x E)	$0.00	
***Total Well Installation Cost (3C + 3F)**	0	
4. Administrative Cost:		
A. Annual cost for record-keeping and report preparation	$5,000.00	
***Annual Administrative Cost (4A)**	$5,000.00	
5. Inspection and Maintenance Cost for the Monitoring Program:		
A. Operator's time (hours) on-site for inspections and maintenance per year	$5.00	$/hr
B. Charge or salary per hour	$65.00	$/hr
C. Annual cost of labor (4A x 4B)	$325.00	$/hr
D. Replacement of parts and equipment per year	$150.00	$/hr
***Annual Inspections / Maintenance Cost for the Groundwater Monitoring Program (5C + 5D)**	$475.00	

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
Ponds WM Area - Stormwater Pond & Bauxite Pond		
1. Annual Sampling and Analysis Cost:		
A. Background Wells		
(1) Number of wells	2	
(2) Sample analysis cost per well	$155.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$620.00	
B. Point of Compliance Wells		
(1) Number of wells	9	
2) Sample analysis cost per well	$155.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$2,790.00	
C. Recovery Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	0	
D. Corrective Action Observation Wells		
(1) Number of wells	9	
(2) Sample analysis cost per well	$155.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$2,790.00	
E. Point of Exposure Wells		
(1) Number of wells	0	

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
F. Supplemental Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
G. Field Quality Control Sampling		
(1) Number of wells	3	
(2) Sample analysis cost per well	$155.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$930.00	
H. Sampling Analysis Cost (1.A+1.B+1.C+1.D+1.E+1.G)	$7,130.00	
2. Sampling Labor Cost:		
A. Hours of sampling per well	2.5	hrs/well
B. Number of sampling technicians per well	1	/yr
C. Charge per hour	$80.00	$/hr
D. Total number of wells to be sampled annually		
E. Total number of wells sampled semi-annually	20	
F. Total number of wells sampled quarterly		
G. Total number of wells sampled monthly		
H. Total number of wells sampled per year (2D) + (2E x 2) + (2F x 4) + (2G x 12)	40	
I. Sampling Labor Cost (2A x 2B x 2C x 2H)	$8,000.00	
***Annual Groundwater Monitoring Cost**	$15,130.00	
3. Well Installation (typical cost):		
A. Monitor well installation cost per well	$0.00	$/well
B. Number of monitor wells to be installed	0	

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
C. Cost of monitor well system (A x B)	$0.00	
D. Recovery well installation cost per well	$0.00	$/well
E. Number of Recovery Wells to be installed	0	
F. Cost of Recovery well system (D x E)	$0.00	
***Total Well Installation Cost (3C + 3F)**	0	
4. Administrative Cost:		
A. Annual cost for record-keeping and report preparation	$10,000.00	
***Annual Administrative Cost (4A)**	$10,000.00	$
5. Inspection and Maintenance Cost for the Monitoring Program:		
A. Operator's time (hours) on-site for inspections and maintenance per year	$20.00	$/hr
B. Charge or salary per hour	$65.00	$/hr
C. Annual cost of labor (4A x 4B)	$1,300.00	$/hr
D. Replacement of parts and equipment per year	$150.00	$/hr
***Annual Inspections / Maintenance Cost for the Groundwater Monitoring Program (5C + 5D)**	$1,450.00	

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
Recovery Wells		
1. Annual Sampling and Analysis Cost:		
A. Background Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
B. Point of Compliance Wells		
(1) Number of wells	0	
2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
C. Recovery Wells		
(1) Number of wells	8	
(2) Sample analysis cost per well	$60.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$960	
D. Corrective Action Observation Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
E. Point of Exposure Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr

Table XI.E.2.e - Groundwater Monitoring Cost Estimate	
(4) Sampling cost (1 x 2 x 3)	$0.00
F. Supplemental Wells	
(1) Number of wells	~~0~~
(2) Sample analysis cost per well	$0.00 $/well
(3) Number of sampling events per year	0 /yr
(4) Sampling cost (1 x 2 x 3)	$0.00
G. Field Quality Control Sampling	
(1) Number of wells	0
(2) Sample analysis cost per well	$0.00 $/well
(3) Number of sampling events per year	0 /yr
(4) Sampling cost (1 x 2 x 3)	$0.00
H. Sampling Analysis Cost (1.A+1.B+1.C+1.D+1.E+1.G)	$960.00
2. Sampling Labor Cost:	
A. Hours of sampling per well	2 hrs/well
B. Number of sampling technicians per well	1 /yr
C. Charge per hour	$80.00 $/hr
D. Total number of wells to be sampled annually	
E. Total number of wells sampled semi-annually	8
F. Total number of wells sampled quarterly	
G. Total number of wells sampled monthly	
H. Total number of wells sampled per year (2D) + (2E x 2) + (2F x 4) + (2G x 12)	16
I. Sampling Labor Cost (2A x 2B x 2C x 2H)	$2,560.00
***Annual Groundwater Monitoring Cost**	$3,520.00
3. Well Installation (typical cost):	
A. Monitor well installation cost per well	$0.00 $/well
B. Number of monitor wells to be installed	0
C. Cost of monitor well system (A x B)	$0.00
D. Recovery well installation cost per well	$0.00 $/well

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
E. Number of Recovery Wells to be installed	0	
F. Cost of Recovery well system (D x E)	$0.00	
***Total Well Installation Cost (3C + 3F)**	0	
4. Administrative Cost:		
A. Annual cost for record-keeping and report preparation	$0.00	
***Annual Administrative Cost (4A)**	$0.00	$
5. Inspection and Maintenance Cost for the Monitoring Program:		
A. Operator's time (hours) on-site for inspections and maintenance per year	$0.00	$/hr
B. Charge or salary per hour	$50.00	$/hr
C. Annual cost of labor (4A x 4B)	$0.00	$/hr
D. Replacement of parts and equipment per year	$0.00	$/hr
***Annual Inspections / Maintenance Cost for the Groundwater Monitoring Program (5C + 5D)**	$0.00	

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
Groundwater Region 7		
1. Annual Sampling and Analysis Cost:		
A. Background Wells		
(1) Number of wells		
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
B. Point of Compliance Wells		
(1) Number of wells	0	
2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
C. Recovery Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	0	
D. Corrective Action Observation Wells		
(1) Number of wells	3	
(2) Sample analysis cost per well	$195.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$1,170.00	
E. Point of Exposure Wells		
(1) Number of wells	4	
(2) Sample analysis cost per well	$195.00	$/well
(3) Number of sampling events per year	2	/yr

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
(4) Sampling cost (1 x 2 x 3)	$1,560.00	
F. Supplemental Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
G. Field Quality Control Sampling		
(1) Number of wells	3	
(2) Sample analysis cost per well	$195.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$1,170.00	
H. Sampling Analysis Cost (1.A+1.B+1.C+1.D+1.E+1.G)	$3,900.00	
2. Sampling Labor Cost:		
A. Hours of sampling per well	2.5	hrs/well
B. Number of sampling technicians per well	1	/yr
C. Charge per hour	$80.00	$/hr
D. Total number of wells to be sampled annually		
E. Total number of wells sampled semi-annually	7	
F. Total number of wells sampled quarterly		
G. Total number of wells sampled monthly		
H. Total number of wells sampled per year (2D) + (2E x 2) + (2F x 4) + (2G x 12)	14	
I. Sampling Labor Cost (2A x 2B x 2C x 2H)	$2,800.00	
***Annual Groundwater Monitoring Cost**	$6,700.00	
3. Well Installation (typical cost):		
A. Monitor well installation cost per well	$0.00	$/well
B. Number of monitor wells to be installed	0	
C. Cost of monitor well system (A x B)	$0.00	
D. Recovery well installation cost per well	$0.00	$/well

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
E. Number of Recovery Wells to be installed	0	
F. Cost of Recovery well system (D x E)	$0.00	
***Total Well Installation Cost (3C + 3F)**	0	
4. Administrative Cost:		
A. Annual cost for record-keeping and report preparation	$7,000.00	
***Annual Administrative Cost (4A)**	$7,000.00	$
5. Inspection and Maintenance Cost for the Monitoring Program:		
A. Operator's time (hours) on-site for inspections and maintenance per year	$7.00	$/hr
B. Charge or salary per hour	$65.00	$/hr
C. Annual cost of labor (4A x 4B)	$455.00	$/hr
D. Replacement of parts and equipment per year	$150.00	$/hr
***Annual Inspections / Maintenance Cost for the Groundwater Monitoring Program (5C + 5D)**	$605.00	

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
Site-Wide PMZ		
1. Annual Sampling and Analysis Cost:		
A. Background Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
B. Point of Compliance Wells		
(1) Number of wells	0	
2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
C. Recovery Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	0	
D. Corrective Action Observation Wells		
(1) Number of wells	14	
(2) Sample analysis cost per well	$195.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$5,460.00	
E. Point of Exposure Wells		
(1) Number of wells	5	
(2) Sample analysis cost per well	$195.00	$/well
(3) Number of sampling events per year	2	/yr

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
(4) Sampling cost (1 x 2 x 3)	$1,950.00	
F. Supplemental Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
G. Field Quality Control Sampling		
(1) Number of wells	3	
(2) Sample analysis cost per well	$195.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$1,170.00	
H. Sampling Analysis Cost (1.A+1.B+1.C+1.D+1.E+1.G)	$8,580.00	
2. Sampling Labor Cost:		
A. Hours of sampling per well	2.5	hrs/well
B. Number of sampling technicians per well	1	/yr
C. Charge per hour	$80.00	$/hr
D. Total number of wells to be sampled annually		
E. Total number of wells sampled semi-annually	22	
F. Total number of wells sampled quarterly		
G. Total number of wells sampled monthly		
H. Total number of wells sampled per year (2D) + (2E x 2) + (2F x 4) + (2G x 12)	44	
I. Sampling Labor Cost (2A x 2B x 2C x 2H)	$8,800.00	
***Annual Groundwater Monitoring Cost**	$17,380.00	
3. Well Installation (typical cost):		
A. Monitor well installation cost per well	$0.00	$/well
B. Number of monitor wells to be installed	0	
C. Cost of monitor well system (A x B)	$0.00	
D. Recovery well installation cost per well	$0.00	$/well

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
E. Number of Recovery Wells to be installed	0	
F. Cost of Recovery well system (D x E)	$0.00	
***Total Well Installation Cost (3C + 3F)**	0	
4. Administrative Cost:		
A. Annual cost for record-keeping and report preparation	$10,000.00	
***Annual Administrative Cost (4A)**	$10,000.00	$
5. Inspection and Maintenance Cost for the Monitoring Program:		
A. Operator's time (hours) on-site for inspections and maintenance per year	$15.00	$/hr
B. Charge or salary per hour	$65.00	$/hr
C. Annual cost of labor (4A x 4B)	$975.00	$/hr
D. Replacement of parts and equipment per year	$150.00	$/hr
***Annual Inspections / Maintenance Cost for the Groundwater Monitoring Program (5C + 5D)**	$1,125.00	

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
West Property		
1. Annual Sampling and Analysis Cost:		
A. Background Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
B. Point of Compliance Wells		
(1) Number of wells	5	
2) Sample analysis cost per well	$525.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$5250.00	
C. Recovery Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	0	
D. Corrective Action Observation Wells		
(1) Number of wells	17	
(2) Sample analysis cost per well	$525.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$17850.00	
E. Point of Exposure Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
(4) Sampling cost (1 x 2 x 3)	$0.00	
F. Supplemental Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
G. Field Quality Control Sampling		
(1) Number of wells	12	
(2) Sample analysis cost per well	$525.00	$/well
(3) Number of sampling events per year	1	/yr
(4) Sampling cost (1 x 2 x 3)	$6,300.00	
H. Sampling Analysis Cost (1.A+1.B+1.C+1.D+1.E+1.G)	$17,850.00	
2. Sampling Labor Cost:		
A. Hours of sampling per well	2.5	hrs/well
B. Number of sampling technicians per well	1	/yr
C. Charge per hour	$80.00	$/hr
D. Total number of wells to be sampled annually		
E. Total number of wells sampled semi-annually	22	
F. Total number of wells sampled quarterly		
G. Total number of wells sampled monthly		
H. Total number of wells sampled per year (2D) + (2E x 2) + (2F x 4) + (2G x 12)	44	
I. Sampling Labor Cost (2A x 2B x 2C x 2H)	$8,800.00	
***Annual Groundwater Monitoring Cost**	$26,650.00	
3. Well Installation (typical cost):		
A. Monitor well installation cost per well	$0.00	$/well
B. Number of monitor wells to be installed	0	
C. Cost of monitor well system (A x B)	$0.00	
D. Recovery well installation cost per well	$0.00	$/well

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
E. Number of Recovery Wells to be installed	0	
F. Cost of Recovery well system (D x E)	$0.00	
***Total Well Installation Cost (3C + 3F)**	0	
4. Administrative Cost:		
A. Annual cost for record-keeping and report preparation	$10000	
***Annual Administrative Cost (4A)**	$10000	$
5. Inspection and Maintenance Cost for the Monitoring Program:		
A. Operator's time (hours) on-site for inspections and maintenance per year	50	$/hr
B. Charge or salary per hour	$50.00	$/hr
C. Annual cost of labor (4A x 4B)	$2500.00	$/hr
D. Replacement of parts and equipment per year	$150.00	$/hr
***Annual Inspections / Maintenance Cost for the Groundwater Monitoring Program (5C + 5D)**	$2650.00	

Table XI.E.3. - Financial Assurance Summary

Ponds WM Area (Stormwater Pond and Bauxite Pond)	
Task	Cost
Annual Off-Site Liquid Treatment / Disposal Cost	$900.00
Annual On-Site Treatment / Disposal Cost	
Annual Inspection / Maintenance / Operation Cost For The Corrective Action Program	$6225.00
Annual Groundwater Monitoring Cost	$15130.00
Annual Administrative Cost	$10000.00
Annual Inspection And Maintenance Cost For The Groundwater Monitoring Program	$1450.00
Annual Sub Total	**$33705.00**
Total Years Used For Calculating Financial Assurance for Corrective Action and/or Compliance Monitoring Program	**30** Years
Remediation Cost (Annual Sub Total x Total Years Used)	$1,011,150.00
On-Site Waste Water Treatment System Capital Cost Total Well Cost	
10% Contingency	$101115.00
Total Cost	$1112265.00
Grand Total Cost (round to nearest $1000)	**$1112000.00**

Table XI.E.3. - Financial Assurance Summary

Groundwater Region 7 Task	Cost
Annual Off-Site Liquid Treatment / Disposal Cost	$3800.00
Annual On-Site Treatment / Disposal Cost	
Annual Inspection / Maintenance / Operation Cost For The Corrective Action Program	$6425.00
Annual Groundwater Monitoring Cost	$6700.00
Annual Administrative Cost	$7000.00
Annual Inspection And Maintenance Cost For The Groundwater Monitoring Program	$605.00
Annual Sub Total	**$24530.00**
Total Years Used For Calculating Financial Assurance for Corrective Action and/or Compliance Monitoring Program	**30** Years
Remediation Cost (Annual Sub Total x Total Years Used)	$735,900.00
On-Site Waste Water Treatment System Capital Cost Total Well Cost	
10% Contingency	$73590.00
Total Cost	$809490.00
Grand Total Cost (round to nearest $1000)	**$809000.00**

Table XI.E.3. - Financial Assurance Summary

Site-Wide PMZ Task	Cost
Annual Off-Site Liquid Treatment / Disposal Cost	$1400.00
Annual On-Site Treatment / Disposal Cost	
Annual Inspection / Maintenance / Operation Cost For The Corrective Action Program	$13850.00
Annual Groundwater Monitoring Cost	$17380.00
Annual Administrative Cost	$10000.00
Annual Inspection And Maintenance Cost For The Groundwater Monitoring Program	$1125.00
Annual Sub Total	**$43755.00**
Total Years Used For Calculating Financial Assurance for Corrective Action and/or Compliance Monitoring Program	**30** Years
Remediation Cost (Annual Sub Total x Total Years Used)	$1312650.00
On-Site Waste Water Treatment System Capital Cost Total Well Cost	
10% Contingency	$131265.00
Total Cost	$1443915.00
Grand Total Cost (round to nearest $1000)	**$1444000.00**

Table XI.E.3. - Financial Assurance Summary

Moat Task	Cost
Annual Off-Site Liquid Treatment / Disposal Cost	
Annual On-Site Treatment / Disposal Cost	
Annual Inspection / Maintenance / Operation Cost For The Corrective Action Program	
Annual Groundwater Monitoring Cost	$5120.00
Annual Administrative Cost	$5000.00
Annual Inspection And Maintenance Cost For The Groundwater Monitoring Program	$475.00
Annual Sub Total	**$10595.00**
Total Years Used For Calculating Financial Assurance for Corrective Action and/or Compliance Monitoring Program	**30** Years
Remediation Cost (Annual Sub Total x Total Years Used)	$317850.00
On-Site Waste Water Treatment System Capital Cost Total Well Cost	
10% Contingency	$31785.00
Total Cost	$349635.00
Grand Total Cost (round to nearest $1000)	**$350000.00**

Table XI.E.3. - Financial Assurance Summary

Recovery Wells Task	Cost
Annual Off-Site Liquid Treatment / Disposal Cost	
Annual On-Site Treatment / Disposal Cost	
Annual Inspection / Maintenance / Operation Cost For The Corrective Action Program	
Annual Groundwater Monitoring Cost	$3520.00
Annual Administrative Cost	
Annual Inspection And Maintenance Cost For The Groundwater Monitoring Program	
Annual Sub Total	**$3520.00**
Total Years Used For Calculating Financial Assurance for Corrective Action and/or Compliance Monitoring Program	**30** Years
Remediation Cost (Annual Sub Total x Total Years Used)	$105600.00
On-Site Waste Water Treatment System Capital Cost Total Well Cost	
10% Contingency	$10560.00
Total Cost	$116160.00
Grand Total Cost (round to nearest $1000)	**$116000.00**

Table XI.E.3. - Financial Assurance Summary

West Property Task	Cost
Annual Off-Site Liquid Treatment / Disposal Cost	
Annual On-Site Treatment / Disposal Cost	
Annual Inspection / Maintenance / Operation Cost For The Corrective Action Program	
Annual Groundwater Monitoring Cost	$26650.00
Annual Administrative Cost	$10000.00
Annual Inspection And Maintenance Cost For The Groundwater Monitoring Program	$2650.00
Annual Sub Total	**$39300.00**
Total Years Used For Calculating Financial Assurance for Corrective Action and/or Compliance Monitoring Program	**30** Years
Remediation Cost (Annual Sub Total x Total Years Used)	$1179000.00
On-Site Waste Water Treatment System Capital Cost Total Well Cost	
10% Contingency	$117900.00
Total Cost	$1296900.00
Grand Total Cost (round to nearest $1000)	**$1297000.00**

Table XI.E.3. - Financial Assurance Summary

Total Costs for all areas subject to RCRA Corrective Action and Compliance Monitoring Programs	
Task	Cost
Annual Off-Site Liquid Treatment / Disposal Cost	$6100.00
Annual On-Site Treatment / Disposal Cost	
Annual Inspection / Maintenance / Operation Cost For The Corrective Action Program	$26500.00
Annual Groundwater Monitoring Cost	$74500.00
Annual Administrative Cost	$42000.00
Annual Inspection And Maintenance Cost For The Groundwater Monitoring Program	$6305.00
Annual Sub Total	**$155405.00**
Total Years Used For Calculating Financial Assurance for Corrective Action and/or Compliance Monitoring Program	**30** Years
Remediation Cost (Annual Sub Total x Total Years Used)	$4662150.00
On-Site Waste Water Treatment System Capital Cost Total Well Cost	
10% Contingency	$466215.00
Total Cost	$5128365.00
Grand Total Cost (round to nearest $1000)	**$5128000.00**

Attachment H
Revised Preliminary Review Checklists

Redline Preliminary Review Checklists

Preliminary Review Facility Checklist

Facility: Pasadena Refinery City: Pasadena

ISW Reg No: 30311 Date: May 15, 2025

Permit No: 50112 Reviewer:

EPA ID No: TXD008091290

A. Waste Management Units:

RCRA Regulated Units:

NOR No.	Description	Status
~~PRSI Main Refinery & Red Bluff Tank Farm NOR: 30311~~		
001	Moat	Post-Closure Care
002	Stormwater Pond	Active – In Delay of Closure
004	Barrel Storage Yard	Closed
007	Bauxite Pond	Post-Closure Care

Solid Waste Management Units:

NOR No.	Description	Status
~~PRSI Main Refinery & Red Bluff Tank Farm NOR: 30311~~		
	Tank Fire Walls (consisting of 33 tanks: 1, 2, 47 (removed), 50, 51, 85, 97, 202, 203, 204, 206, 314 to 317, 319 to 327, 330 (formerly 207), 331, 332, 348, 811, 820, and 824 to 826)	SWMU 1. Active. Addressed in compliance plan.
	Buried Cell Near the Bauxite Pond	SWMU 2. Inactive. Addressed in compliance plan.
005	Contaminated Coke Waste Pile	SWMU 4. Inactive. NFA Approved 9/7/2006.
008	Never Used Roadfill	Active. No change since last permit renewal.
009	Never Used CPI Separator Sludge Tank	Active. No change since last permit renewal.
010	Temp. Hazardous Waste Container Storage Area Roll-Offs	Active. No change since last permit renewal.

NOR No.	Description	Status
011	Storage Bin	Closed
012	Storage Bin	Closed
	Area Immediately Surrounding the Bauxite Pond	SWMU 5. Inactive. NFA Approved 9/7/2006.
	Dehydrator Tank Fire Walls	SWMU 6. Active. Addressed in compliance plan.
	Maintenance Area Ditch	SWMU 7. Active. Addressed in compliance plan.
	Detol Pad	SWMU 8. Active. Addressed in compliance plan.
	Sandblast Grit Pile	SWMU 9. Active. NFA approved 9/7/2006.
	Groundwater Region 7	AOC 10. Addressed in compliance plan.
	Groundwater Regions 1, 2, 3, 4, 5, and 6	AOC 11. Addressed in compliance plan.
013	Tank 97 Storage Process Wastewater/ Stormwater Treatment	Active. Addressed in compliance plan.
014	CPI Separator	Active. No change since last permit renewal.
015	#2 Trap	SWMU 3. Active. NFA Approved 9/7/2006.
016	#3 Trap	Active. No change since last permit renewal.
017	Storage Bins	Closed
018	Storage Bins	Closed
019	Storage Bin for Oily Trash Only	Active. No change since last permit renewal.
020	Tank 400 Wastewater/Stormwater Management Unit	Active. No change since last permit renewal.

NOR No.	Description	Status
021	Container Storage Area Less than 90 Day Storage	Active. No change since last permit renewal.
022	Closed Sand Blast Grit Pile	Closed
023	Universal Waste Battery Storage	Closed
024	Weathered Tank Bottom Storage Area	Closed
025	Frac Tank	Active. No change since last permit renewal.
026	Container Storage Area for Platinum Catalyst	Active. No change since last permit renewal.
027	Portable Temporary CBM Tank	Closed
028	Portable Temporary CBM Tank	Closed
029	ARN Tank for Temporary Storage of ARN	Closed
030	Portable ARN Tank for Temporary Storage of ARN	Closed
031	Tank 51 (Wastewater Surge Capacity Tank)	Closed
032	65 Tank Wastewater/Stormwater Management Unit	Closed
033	Container Storage for Crushed Nonhazardous Fluorescent bulbs	Closed
034	Wastewater from Refining Process 321 Tank	Closure Request
035	Less Than 90 Day Drum Storage West Plant	Closed
036	Container Storage Area (West Plant) Less Than 90 Day Storage	Active. No change since last permit renewal.
037	Tank 250 Wastewater and Stormwater Storage as Part of WWT for Facility	Active. No change since last permit renewal.
038	Deluge System Impoundment	Active. No change since last permit renewal.
	Tanks 203 & 204	Inactive. New SWMU 12 added to compliance plan December 2023.
013	Tank 97	Inactive. New SWMU 13 added to compliance plan December 2023.

NOR No.	Description	Status
	Tank 830	Inactive. New SWMU 14 added to compliance plan December 2023.
	Tank 307	Inactive. New SWMU 15 added to compliance plan December 2023.
	RBTF Storm Water System	Active. New SWMU 23 added to compliance plan in this renewal.
	Historical Tank Footprint	Active. New AOC 24 added to compliance plan in this renewal.
	Aboveground Piping	Active. New AOC 25 added to compliance plan in this renewal.
	Former Truck Loading Terminal	Inactive. New AOC 26 added to compliance plan in this renewal.
	City of Pasadena Laydown Storage Yard	Active. New AOC 27 added to compliance plan in this renewal.
~~PRSI West Property Pulp Mill – NOR: 30582~~		
~~001~~	~~NA~~	~~Closed~~
301	Dumpster (Cafeteria, Labs, Offices)	Closed
302	Dumpster (Machine Shops)	Closed
303	Dumpster (Evaporators)	Closed
304	Dumpster (Water Treatment Plant)	Closed
305	Dumpster (Carpenter Shop)	Closed
306	Dumpster (Storeroom)	Closed
307	Dumpster (Storeroom)	Closed
308	Dumpster (24 Machine Maintenance Shops)	Closed
309	Dumpster (24 Machine)	Closed
310	Dumpster (Contractor Hill Dumpster)	Closed

NOR No.	Description	Status
311	Roll-off Dumpster (24 Machine)	Closed
312	Roll-off Dumpster (24 Machine)	Closed
313	Roll-off Dumpster (24 Machine)	Closed
314	Roll-off Dumpster (24 Machine)	Closed
315	Roll-off Dumpster (Mobile Shop)	Closed
316	Roll-off Dumpster (Mobile Shop)	Closed
317	Roll-off Dumpster (Truck Staging Area)	Closed
318	Roll-off Dumpster (Storeroom Dumpster)	Closed
319	Waste piles in salvage yard	Active. New SWMU added to compliance plan October 2024.
320	Waste piles near paint shop	Active. New SWMU added to compliance plan October 2024.
321	Container Storage Area	Closed
322	Container Storage Area	Closed
323	Enclosed Dumpster for Asbestos Waste	Closed
324	Storage Area for Asbestos Containing Materials	Active. New SWMU added to compliance plan October 2024.
325	Safety-Kleen Parts Washer (Pump Shop)	Closed
326	Safety-Kleen Parts Washer (Mobile Shop)	Closed
327	Safety-Kleen Parts Washer (Mobile Shop)	Closed
~~001~~401	NA	Closed
~~002~~402	Storage Area for Asbestos Containing Material	Active. New SWMU added to compliance plan October 2024.
~~003~~403	Container Storage Area (General Storeroom)	Closed
~~004~~404	Miscellaneous Storage Container	Closed
~~005~~405	Miscellaneous Storage Container	Closed

NOR No.	Description	Status
~~006~~406	Trash Dumpsters	Closed
~~008~~408	Dumpster for recaust process tank bottoms and associated piping scale from cleaning activities	Closed
~~009~~409	Dumpster for recaust process tank bottoms and associated piping generated during cleanup activity	Closed
~~010~~410	Miscellaneous Storage Container	Closed
~~011~~411	Miscellaneous Storage Container	Closed
~~012~~412	Miscellaneous Storage Container	Closed
~~013~~413	Mill wide process waste water collection system	Active. No change since last permit renewal.
~~014~~414	Container Storage Area (Hazardous Waste Paint Storage Room)	Closure In Accordance with RAP. New SWMU added to compliance plan October 2024.
~~015~~415	Container Storage Area (Mobile Vehicle Maintenance Shop)	Closed
~~016~~416	Miscellaneous Storage Container	Closed
~~017~~417	Thermal oxidation process incinerator	Closure In Accordance with RAP. New SWMU added to compliance plan October 2024.
~~018~~418	Wood waste pile and dumpsters	Closed
~~019~~419	Dumpsters (Paper Machine)	Closed
~~020~~420	Dumpsters (Mobil Shop)	Closed
~~021~~421	Dumpsters (Salvage Yard)	Closed
~~022~~422	Dumpsters (Cafeteria and General Office)	Closed
~~023~~423	Turnaround / Outage Dumpsters	Closed
~~024~~424	Salvage Yard Piles	Closure Report Submitted August 2023. New SWMU added to compliance plan October 2024.
~~025~~425	Dumpsters (Paint Shop)	Closed

NOR No.	Description	Status
~~026~~426	Pile near Paint Shop	Closure In Accordance with RAP. New SWMU added to compliance plan October 2024.
~~027~~427	Abandoned Cooling Tower Basin	Closure Report Submitted August 2023. New SWMU added to compliance plan October 2024.
~~028~~428	Main Sewer Dump Station	Closed
~~029~~429	Maintenance Shop Dumpsters	Closed
~~030~~430	Storeroom Dumpsters	Closed
~~PRSI West Property Paper Mill – NOR: 86155~~		
~~001~~	~~Dumpster (Cafeteria, Labs, Offices)~~	~~Closed~~
~~002~~	~~Dumpster (Machine Shops)~~	~~Closed~~
~~003~~	~~Dumpster (Evaporators)~~	~~Closed~~
~~004~~	~~Dumpster (Water Treatment Plant)~~	~~Closed~~
~~005~~	~~Dumpster (Carpenter Shop)~~	~~Closed~~
~~006~~	~~Dumpster (Storeroom)~~	~~Closed~~
~~007~~	~~Dumpster (Storeroom)~~	~~Closed~~
~~008~~	~~Dumpster (24 Machine Maintenance Shops)~~	~~Closed~~
~~009~~	~~Dumpster (24 Machine)~~	~~Closed~~
~~010~~	~~Dumpster (Contractor Hill Dumpster)~~	~~Closed~~
~~011~~	~~Roll-off Dumpster (24 Machine)~~	~~Closed~~
~~012~~	~~Roll-off Dumpster (24 Machine)~~	~~Closed~~
~~013~~	~~Roll-off Dumpster (24 Machine)~~	~~Closed~~
~~014~~	~~Roll-off Dumpster (24 Machine)~~	~~Closed~~
~~015~~	~~Roll-off Dumpster (Mobile Shop)~~	~~Closed~~
~~016~~	~~Roll-off Dumpster (Mobile Shop)~~	~~Closed~~
~~017~~	~~Roll-off Dumpster (Truck Staging Area)~~	~~Closed~~

NOR No.	Description	Status
~~018~~	~~Roll-off Dumpster (Storeroom Dumpster)~~	~~Closed~~
~~019~~	~~Waste piles in salvage yard~~	~~Active. New SWMU added to compliance plan October 2024.~~
~~020~~	~~Waste piles near paint shop~~	~~Active. New SWMU added to compliance plan October 2024.~~
~~021~~	~~Container Storage Area~~	~~Closed~~
~~022~~	~~Container Storage Area~~	~~Closed~~
~~023~~	~~Enclosed Dumpster for Asbestos Waste~~	~~Closed~~
~~024~~	~~Storage Area for Asbestos Containing Materials~~	~~Active. New SWMU added to compliance plan October 2024.~~
~~025~~	~~Safety-Kleen Parts Washer (Pump Shop)~~	~~Closed~~
~~026~~	~~Safety-Kleen Parts Washer (Mobile Shop)~~	~~Closed~~
~~027~~	~~Safety-Kleen Parts Washer (Mobile Shop)~~	~~Closed~~
~~New AOCs~~		
	West Property: Aboveground Tanks and Surface Conveyance Feature	Inactive. New AOC 28 added to compliance plan in this renewal
	West Property: Former Roof Shingle Production Area	Inactive. New AOC 29 added to compliance plan in this renewal
	South Property: Former Fuel Storage Area	Inactive. New AOC 30 added to compliance plan in this renewal
	South Property: Former Concrete Batch Plant Equipment	Inactive. New AOC 31 added to compliance plan in this renewal
	South Property: Former Pond 1	Inactive. New AOC 32 added to compliance plan in this renewal
	South Property: Former Pond 2	Inactive. New AOC 33 added to compliance plan

NOR No.	Description	Status
		in this renewal
	South Property: Former Pond 3	Inactive. New AOC 34 added to compliance plan in this renewal
	South Property: Equipment Washdown Pad and Sump	Inactive. New AOC 35 added to compliance plan in this renewal

B. Reviewed Documents:

RCRA:	Located within TCEQ files
Part A _____	Located within TCEQ files
Part B _____	None
Permit _____	NOR

CERCLA:

Inspection Reports:

Enforcement Actions:

Exposure Information:

Other Information:

C. Summary:

See Unit Checklists

D. Recommended Action:

See Unit Checklists

Preliminary Review Unit Checklist

Facility: Pasadena Refinery City: Pasadena

ISW Reg No: 30311 Date: May 15, 2025

Permit No: 50112 Reviewer:

EPA ID No: TXD008091290

~~PRSI West Property Paper Mill – NOR: 86155~~	
A. Nor No.:	~~001~~301
B. Description:	Dumpster (8-cu. yds.); cafeteria, labs and offices
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, empty or crushed fiber, empty or crushed metal, construction debris, wood debris from mill.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~002~~302
B. Description:	Dumpster (8-cu. yds.); machine shops
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, empty or crushed fiber, empty or crushed metal, construction debris, wood debris from mill.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~003~~303
B. Description:	Dumpster (6-cu. yds.); evaporators (east side of powerhouse)
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris.
Evidence of Release:	No evidence of a release

Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~004~~304
B. Description:	Dumpster (6-cu. yds.); water treatment plant
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~005~~305
B. Description:	Dumpster (4-cu. yds); carpenter shop
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~006~~306
B. Description:	Dumpster (8-cu. yds.); storeroom

C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~007~~307
B. Description:	Dumpster (8-cu. yds.); storeroom
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~008~~308
B. Description:	Dumpster (8-cu. yds.); 24 machine maintenance shops
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.

Recommended Action:	No further action
A. Nor No.:	~~009~~309
B. Description:	Dumpster (6-cu. yds.); 24 machine N
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Wood debris, construction debris, plant refuse.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~010~~310
B. Description:	Dumpster (8-cu. yds.); contractor hill dumpster
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~011~~311
B. Description:	Roll-off dumpster (30-cu. yds.); 24 machine NW corner
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.

Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~012~~312
B. Description:	Roll-off dumpster (30-cu. yds.); 24 machine NW corner
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~013~~313
B. Description:	Roll-off dumpster (30-cu. yds.); 24 machine NW corner
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action

A. Nor No.:	~~014~~314
B. Description:	Roll-off dumpster (40-cu. yds.); 24 machine SW corner
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~015~~315
B. Description:	Roll-off dumpster (30-cu. yds.); mobile shop S1
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~016~~316
B. Description:	Roll-off dumpster (30-cu. yds.); mobile shop S2
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of a release

Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~017~~317
B. Description:	Roll-off dumpster (30-cu. yds.); truck staging area
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Wood debris from mill, construction debris, plant refuse.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~018~~318
B. Description:	Roll-off dumpster (30-cu. yds.); storeroom dumpster
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~019~~319
B. Description:	Waste Piles in Salvage Yard

C. Dates of Operation:	1999 - present
Wastes Previously and/or Currently Managed:	Sandblasting Waste
Evidence of Release:	According to the 2011 APAR, soil samples collected from soil borings B-41/B-46 to assess hexavalent chromium, PP metals, SVOCs, asbestos, sulfate/sulfide, and pH. Additional samples located nearby, but may not be associated with PM019/PP024 include soil borings B-4-A (MW-4) and B-5-A (MW-5) and delineation borings B-42, B-43, and B-45. Analysis includes PCBs, metals, VOCs, SVOCs and dioxin/furans.
Pollutant Dispersal Pathways:	Potential for soil leaching to groundwater.
Summary:	2011 APAR indicated that this area was addressed under Texas Risk Reduction Program (TRRP) rules. Surface soil, subsurface soil, and groundwater samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), dioxins and furans, metals, cyanide, sulfide, and ammonium. No COCs in surface soil exceeded commercial/industrial PCL. No COCs in subsurface soil exceeded applicable residential or commercial/industrial PCL. No detected COC concentrations reported in groundwater exceed their residential or commercial/industrial groundwater PCLs. Mercury exceeded soil leaching to groundwater PCL in a single sample; however, the corresponding mercury SPLP leachate result did not exceed the groundwater ingestion PCL. Beryllium and lead were not detected above their Tier 1 PCLs for the soil leaching to groundwater pathway; however, SPLP leachate results exceeded their PCL for the groundwater ingestion pathway. Groundwater sampling results confirmed that beryllium, lead, and mercury were not detected in groundwater at concentrations above their applicable Tier 1 residential or commercial/industrial groundwater PCLs.
Recommended Action:	No further action. Closure request submitted 8/31/2023.
A. Nor No.:	~~020~~320
B. Description:	Waste Piles Near Paint Shop
C. Dates of Operation:	1999 - present

Wastes Previously and/or Currently Managed:	Sandblasting Waste
Evidence of Release:	The 2017 RAER noted Soil GWSoilIng PCL exceedances for lead and benz[a]anthracene. Soil TotSoilComb PCL exceedances of benz(a)anthracene, benzo(a)pyrene, and dibenz(a,h)anthracene documented in the 2012 RAP.
Pollutant Dispersal Pathways:	Potential migration from soil to groundwater.
Summary:	Area is co-located with PP026 and adjacent to PP014. Waste pile was also used by Pasadena Paper Company, LP. This unit was evaluated in the 2012 RAP, the 2017 RAER, and the 2020 RAER and a deed restriction and long-term groundwater monitoring are in place for this portion of the property.
Recommended Action:	Continue long-term groundwater monitoring.
A. Nor No.:	~~021~~321
B. Description:	Container storage area; drum and tote bin storage area for disposal; drum storage area for material from spill clean-up; and battery storage prior to disposal.
C. Dates of Operation:	Unknown
Wastes Managed:	Organic and inorganic papermaking waste, petroleum contaminated waste, empty or crushed metal, empty or crushed fiber, debris from mill cleanup.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 8/27/2010.
Recommended Action:	No further action
A. Nor No.:	~~022~~322
B. Description:	Container storage area; area in storeroom for hazardous wastes.
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Caustic and acidic aqueous waste, Safety-Kleen

	waste, organic paint, ink, lacquer.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 8/27/2010.
Recommended Action:	No further action
A. Nor No.:	~~023~~323
B. Description:	40-cu. yds. fully enclosed dumpster for asbestos waste.
C. Dates of Operation:	1999 - 2008
Wastes Previously and/or Currently Managed:	Asbestos
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 5/6/2008.
Recommended Action:	No further action
A. Nor No.:	~~024~~324
B. Description:	Storage Area for Asbestos Containing Materials
C. Dates of Operation:	1999 - present
Wastes Previously and/or Currently Managed:	Transite sheeting, asbestos insulation, PCB oil low concentration.
Evidence of Release:	No; but soil sampling has not been completed under existing 20-inch concrete foundation.
Pollutant Dispersal Pathways:	No release identified; if a release to soil has occurred, there is potential for downward migration into groundwater.
Summary:	PRSI proposed using the existing 20-inch foundation of PM024/PP002 as an engineered cap until such time that demolition would facilitate soil assessment. The cap is inspected every six months by a professional engineer (P.E.) to ensure that the cap continues to effectively prevent exposure to and leaching of the potentially contaminated soil. Container co-located with PM024.

Recommended Action:	Continue inspections until closure in accordance with 2012 RAP is completed.
A. Nor No.:	~~025~~325
B. Description:	Tank, 30-gallons; Safety-Kleen parts washer; pump shop
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Solvents and residue from parts washing
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~026~~326
B. Description:	Tank, 30-gallons; Safety-Kleen parts washer; mobile shop
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Solvents and residue from parts washing
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~027~~327
B. Description:	Tank, 30-gallons; Safety-Kleen parts washer; mobile shop
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Solvents and residue from parts washing
Evidence of Release:	No evidence of a release

Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action

~~PRSI West Property Pulp Mill – NOR: 30582~~	
A. Nor No.:	~~001~~401
B. Description:	Closed Landfill
C. Dates of Operation	Unknown
Wastes Previously and/or Currently Managed:	Unknown
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	According to the 2011 APAR, additional soil samples were collected to assess sulfate/sulfide and pH. No exceedances observed. TCEQ approved closure prior to 2015; exact date uncertain.
Recommended Action:	No further action
A. Nor No.:	~~002~~402
B. Description:	Storage Area for Asbestos Containing Material
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Asbestos Containing Material, PCB waste and transite sheeting.
Evidence of Release:	No; but soil sampling has not been completed under existing 20-inch concrete foundation.
Pollutant Dispersal Pathways:	No release identified; if a release to soil has occurred, there is potential for downward migration into groundwater.
Summary:	PRSI proposed using the existing 20-inch foundation of PM024/PP002 as an engineered cap until such time that demolition would facilitate soil assessment. The cap is inspected every six months by a professional engineer (P.E.) to ensure that the cap continues to effectively prevent exposure to and leaching of the potentially contaminated soil. Container co-located with PM024.
Recommended Action:	Closure in accordance with 2012 RAP
A. Nor No.:	~~003~~403
B. Description:	Container Storage Area (General Storeroom)
C. Dates of Operation:	Unknown

Wastes Previously and/or Currently Managed:	Grease, organic paint, ink, lacquer, spent solid filters, railroad ties, waste polymer, non-hazardous sandblasting, waste oil, refractory debris, lubricating oil, paper additives, acid spill residue, lab packs, paint thinner, empty or crushed metal, ethylene glycol-based products, waste glue, used paint, biocide, slime, defoaming agents, wood debris, latex waste, used oil filters, waste trial material, batteries or battery parts, petroleum contaminated waste, cleanup of pulping liquor.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site. TCEQ approved closure 8/27/2010.
Recommended Action:	No further action
A. Nor No.:	~~004~~404
B. Description:	Miscellaneous Storage Container
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Asbestos, transite sheeting
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	40-cu. yds fully enclosed dumpster for asbestos. Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site. TCEQ approved closure 5/6/2008.
Recommended Action:	No further action
A. Nor No.:	~~005~~405
B. Description:	Miscellaneous Storage Containers
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Naphtha, asbestos, transite sheeting
Evidence of Release:	No evidence of a release

Pollutant Dispersal Pathways:	Not applicable
Summary:	40-cu. yds. fully enclosed dumpster, also used by Pasadena Paper Company LP. Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site. TCEQ approved closure 8/27/2010.
Recommended Action:	No further action
A. Nor No.:	~~006~~406
B. Description:	Trash Dumpsters
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Supp refuse, contaminated soil, empty or crushed metal, non-hazardous sandblasting, railroad ties, plant refuse, metal scale, filings, wood debris, refractory debris, construction debris, general trash
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	Dumpsters were leased by Pasadena Paper Company. No evidence of release. TCEQ approved closure 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~008~~408
B. Description:	Miscellaneous Storage Containers
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Recaust process tank bottom sludge and associated piping scale from cleaning activities, contaminated soil, solidified slurry
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	TCEQ approved closure 5/6/2008.
Recommended Action:	No further action

A. Nor No.:	~~009~~409
B. Description:	Miscellaneous Storage Containers
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Recaust process tank bottoms and associated piping scale from cleaning activities.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	2011 RAP indicates that surface soil sample SS-1 was collected from Miscellaneous Storage Container WMU PP009 as part of WMU closure activities in April 2009. TCEQ approved closure 3/11/2010.
Recommended Action:	Complete RFI for this area
A. Nor No.:	~~010~~410
B. Description:	Miscellaneous Storage Containers. 30-gallons "Safety Kleen" Parts Washer (Pump Shop).
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Naphtha
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	Equipment was operated by the Pasadena River Paper CO LP (1/20/99). No evidence of release. TCEQ approved closure 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~011~~411
B. Description:	Miscellaneous Storage Containers. 30-gallons "Safety Kleen" Parts Washer (Mobile Shop).
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Naphtha
Evidence of Release:	COCs that exceeded ALs in soil include antimony, benz(a)anthracene, benzo(b)fluoranthene, dibenz(a,h)anthracene, cadmium, copper, lead,

	dioxin/furan, selenium, and zinc. 2011 APAR indicates that soil impacts in this area are likely associated with historic painting and debris piles in the area.
Pollutant Dispersal Pathways:	Potential for migration from soil to groundwater.
Summary:	TCEQ approved closure 3/11/2010. This unit was evaluated in the 2011 APAR and a deed restriction and long-term groundwater monitoring are in place for this portion of the property.
Recommended Action:	Incorporate long-term groundwater monitoring into permit renewal application to be submitted in 2024.
A. Nor No.:	~~012~~412
B. Description:	Miscellaneous Storage Container. 30-gallons “Safety Kleen” Parts Washer (Cutter Shop).
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Naphtha
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	Equipment was by the Pasadena River Paper CO LP (1/20/99). No evidence of release. TCEQ approved closure 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~013~~413
B. Description:	Mill Wide Process Waste Water Collection System
C. Dates of Operation:	Unknown to present
Wastes Previously and/or Currently Managed:	Pulp, wood fiber, caustic aqueous waste, acidic and non-acidic aqueous wastewater, tall oil organic sludge, solidified slurry, neutralized HC1 and H2SO4 tank slurry, oily sludge, defoaming agents, acid spill residue, inorganic sludge, ethylene glycol-based waste, waste trial material, solidified slurry of calcium, waste polymer, reactive sludge, paper additives, brine solution, cleanup of pulping liquor, paper machine felt cleaner, effluent isolation tank, acid buggy.

Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Pulp Mill was mothballed at time of ownership change 1/20/99. Between that time and 2005 the WWTP was used to treat intake water (raw water from the Trinity River) from the City of Houston. Treated water was then used to support the Paper Mill processes. In 2005 the WWTP was repurposed to store water for fire suppression. Water is stored in three bays that are maintained in accordance with a City of Houston agreement.
Recommended Action:	WMU in use. Request TCEQ to update NOR to reflect current use.
A. Nor No.:	~~014~~414
B. Description:	Container Storage Area (Hazardous Waste Paint Storage Room)
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Organic paint, ink, lacquer, paint thinner or petroleum, acid spill residue - contains, empty or crushed metal.
Evidence of Release:	COCs that exceeded ALs in soil include antimony, benz(a)anthracene, benzo(b)fluoranthene, dibenz(a,h)anthracene, cadmium, copper, lead, dioxin/furan, selenium, and zinc. 2011 APAR indicates that soil impacts in this area are likely associated with historic painting and debris piles in the area.
Pollutant Dispersal Pathways:	Potential for migration from soil to groundwater.
Summary:	TCEQ approved closure 3/11/2010. This unit was evaluated in the 2011 APAR and a deed restriction and long-term groundwater monitoring are in place for this portion of the property.
Recommended Action:	Incorporate long-term groundwater monitoring into permit renewal application to be submitted in 2024.
A. Nor No.:	~~015~~415
B. Description:	Container storage area located at mobile vehicle maintenance shop.
C. Dates of Operation:	Unknown

Wastes Previously and/or Currently Managed:	Batteries or battery parts, waste oil, ethylene glycol-based waste, empty or crushed metal, spent solid filters
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	NA
Summary:	No evidence of release. TCEQ approved closure 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~016~~416
B. Description:	Miscellaneous Storage Container. 40-cu. yds. open top dumpster.
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Metal scale, filings, empty or crushed metal
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	NA
Summary:	No evidence of release. TCEQ approved closure 5/6/2008.
Recommended Action:	No further action
A. Nor No.:	~~017~~417
B. Description:	Thermal Oxidation Process Incinerator
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Inorganic gases from pulp
Evidence of Release:	2011 APAR indicated COCs that exceeded ALs include antimony, arsenic, benzo(a)pyrene, benzo(fluoranthene, cadmium, copper, nickel, selenium, zinc, and lead. Soil impacts in this area are likely associated with former debris piles in the area.
Pollutant Dispersal Pathways:	Potential for migration from soil to groundwater and surface water (Little Vince and Vince Bayous).
Summary:	This unit was evaluated in the 2011 APAR and a deed restriction and long-term groundwater monitoring are in place for this portion of the property. In response to the 2011 APAR, TCEQ

	requested more sampling to show Little Vince and Vince Bayous have not been impacted by COCs. In the 2015 Assessment Report, results indicate that COCs detected in surface water and sediment in the Little Vince Bayou are not associated with historical operations at the site. No additional ecological evaluation of the Little Vince Bayou is warranted based on the result of this assessment. Annual groundwater monitoring reports will continue to be submitted.
Recommended Action:	Incorporate long-term groundwater monitoring into permit renewal application to be submitted in 2024.
A. Nor No.:	~~018~~418
B. Description:	Wood Waste Pile and Dumpsters
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Wood
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	Waste Pile and Dumpsters removed when Pump Mill was mothballed. No evidence of release. TCEQ approved closure 5/6/2008.
Recommended Action:	No further action
A. Nor No.:	~~019~~419
B. Description:	Dumpsters
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Wood fiber and debris
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	Dumpsters located in NW corner of 24 Paper Machine. Dumpsters used and managed by Pasadena Paper Company, LP. No evidence of release. TCEQ approved closure 5/6/2008.
Recommended Action:	No further action

A. Nor No.:	~~020~~420
B. Description:	Dumpsters
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Construction debris, empty or crushed metal, supp refuse, wood debris, plant refuse.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	Dumpsters located South of Mobil Shop. Dumpsters leased and used by Pasadena Paper Company, LP. No evidence of release. TCEQ approved closure 5/6/2008.
Recommended Action:	No further action
A. Nor No.:	~~021~~421
B. Description:	Dumpsters
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Metal scale, filings, plant refuse, empty or crushed metal, refractory debris, wood debris, construction debris.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	Dumpsters located in Salvage Yard. Dumpsters leased and used by Pasadena Paper Company, LP. No evidence of release. TCEQ approved closure 5/6/2008.
Recommended Action:	No further action
A. Nor No.:	~~022~~422
B. Description:	Dumpsters
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Supp refuse, general office trash.
Evidence of Release:	No evidence of a release

Pollutant Dispersal Pathways:	Not applicable
Summary:	Dumpsters located in Cafeteria and General Office Waste. Dumpsters leased and used by Pasadena Paper Company, LP. No evidence of release. TCEQ approved closure 5/6/2008.
Recommended Action:	No further action
A. Nor No.:	~~023~~423
B. Description:	Turnaround/Outage Dumpsters
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Contaminated soil, recaust tank bottom sludge, construction debris, inorganic sludge, solidified calcium slurry, paper machine/pulp dryer, wood fiber, refractory debris.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	In service temporarily during major plant shutdowns, turnarounds and outages. No evidence of release. TCEQ approved closure 5/6/2008.
Recommended Action:	No further action
A. Nor No.:	~~024~~424
B. Description:	Salvage Yard Piles
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Railroad ties - old railroad, metal scale, filings, empty or crushed metal, wood debris from mill, debris-construction, soil – contaminated.
Evidence of Release:	Exceedance of soil leaching to groundwater PCL for mercury in a surface soil sample. Exceedance of groundwater ingestion PCL for beryllium and lead in Synthetic Precipitation Leaching Procedure (SPLP) leachate results.
Pollutant Dispersal Pathways:	Potential for soil leaching to groundwater.
Summary:	2011 APAR indicated that this area was addressed under Texas Risk Reduction Program (TRRP) rules. Surface soil, subsurface soil, and groundwater samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic

	compounds (SVOCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), dioxins and furans, metals, cyanide, sulfide, and ammonium. No COCs in surface soil exceeded commercial/industrial PCL. No COCs in subsurface soil exceeded applicable residential or commercial/industrial PCL. No detected COC concentrations reported in groundwater exceed their residential or commercial/industrial groundwater PCLs. Mercury exceeded soil leaching to groundwater PCL in a single sample; however, the corresponding mercury SPLP leachate result did not exceed the groundwater ingestion PCL. Beryllium and lead were not detected above their Tier 1 PCLs for the soil leaching to groundwater pathway; however, SPLP leachate results exceeded their PCL for the groundwater ingestion pathway. Groundwater sampling results confirmed that beryllium, lead, and mercury were not detected in groundwater at concentrations above their applicable Tier 1 residential or commercial/industrial groundwater PCLs.
Recommended Action:	No further action. Closure request submitted 8/31/2023.
A. Nor No.:	~~025~~425
B. Description:	Dumpsters
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Non-hazardous sandblasting waste
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	Dumpsters located near paint shop SW corner of facility. Dumpster leased and used by Pasadena Paper Company, LP. No evidence of release. TCEQ approved closure 5/6/2008.
Recommended Action:	No further action
A. Nor No.:	~~026~~426
B. Description:	Piles Near Paint Shop
C. Dates of Operation:	Unknown

Wastes Previously and/or Currently Managed:	Non-hazardous sandblasting, wood debris from mill, pulp, wood fiber rejected, railroad ties - old railroad, debris-construction.
Evidence of Release:	The 2017 RAER noted Soil GWSoilIng PCL exceedances for lead and benz[a]anthracene. Soil TotSoilComb PCL exceedances of benz(a)anthracene, benzo(a)pyrene, and dibenz(a,h)anthracene documented in the 2012 RAP.
Pollutant Dispersal Pathways:	Potential for migration from soil to groundwater.
Summary:	Area is co-located with PM020 and adjacent to PP014. Waste pile was also used by Pasadena Paper Company, LP. This unit was evaluated in the 2012 RAP, the 2017 RAER, and the 2020 RAER and a deed restriction and long-term groundwater monitoring are in place for this portion of the property.
Recommended Action:	Incorporate long-term groundwater monitoring into permit renewal application to be submitted in 2024.
A. Nor No.:	~~027~~427
B. Description:	Abandoned Cooling Tower Basin
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Debris-construction, contaminated soil.
Evidence of Release:	No evidence of release noted; however, potential for ammonium in surface and subsurface soil at cooling tower location.
Pollutant Dispersal Pathways:	Potential for soil contamination to migrate to groundwater.
Summary:	Based on the use of PP027 as a cooling water tower, analyzed for ammonium in surface and subsurface soils. Ammonium concentrations reported in surface soil are below its applicable Tier 1 residential and commercial/industrial surface soil PCLs. Ammonium concentrations reported in subsurface soil are below its applicable Tier 1 residential and commercial/industrial subsurface soil PCLs. Ammonium SPLP concentration does not exceed its secondary maximum contaminant level (MCL) or its Tier 1 residential or commercial/industrial groundwater to ambient air PCL.
Recommended Action:	Closure in accordance with request submitted on

	8/31/2023.
A. Nor No.:	~~028~~428
B. Description:	Main Sewer Dump Station
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Waste glue, latex waste, defoaming agents, waste polymer, neutralized HC1 and H2SO4, inorganic sludge, solidified calcium slurry, paper machine/pulp dryer, recaust tank bottom sludge, paper additives, pulp, woof fiber, waste trial material
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	Station is located west side of facility near 24 Paper Machine Dry End maintenance shop. No evidence of release. TCEQ approved closure on 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	~~029~~429
B. Description:	Maintenance Shop Dumpsters
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, construction debris, wood debris from mill.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable.
Summary:	Dumpsters located N of BSW unit. Dumpsters were leased and used by Pasadena Paper Company, LP. No evidence of release. TCEQ approved closure 5/6/2008.
Recommended Action:	No further action
A. Nor No.:	~~030~~430
B. Description:	Storeroom Dumpsters
C. Dates of Operation:	Unknown

Wastes Previously and/or Currently Managed:	Plant refuse, pulp, wood fiber, wood debris from mill.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	Dumpsters were leased and used by Pasadena Paper Company, LP. No evidence of release. TCEQ approved closure 5/6/2008.
Recommended Action:	No further action

~~PRSI Main Refinery & Red Bluff Tank Farm NOR: 30311~~	
Nor No.:	
Description:	RBTF: Storm Water System (SWMU 23)
Dates of Operation:	Unknown to present
Wastes Previously and/or Currently Managed:	Stormwater and clean hydrostatic test water
Evidence of Release:	A reportable release that occurred on October 15, 2020 was excavated; however, detections of arsenic, lead, mercury, benzene, toluene, and TPH at concentrations above the Texas Risk Reduction Program PCL for $^{GW}Soil_{Ing}$ pathway remained, attributed to historical releases.
Pollutant Dispersal Pathways:	Potential for soil leaching to groundwater.
Summary:	Various non-reportable hydrocarbon releases in the vicinity of the stormwater ditch have affected soil along the banks of the ditch.
Recommended Action:	Additional assessment to confirm removal of impacts to soil.
Nor No.:	
Description:	RBTF: Historical Tank Footprint (AOC 24)
Dates of Operation:	Approximately 1940 to present
Wastes Previously and/or Currently Managed:	No wastes have been managed at RBTF, which has been used to store petroleum products since its construction.
Evidence of Release:	No evidence of spill releases or cleanup activities were identified in the RBTF RFA; however, the previous owner did not provide documentation of inspections and maintenance of various historical tanks that precludes possible releases.
Pollutant Dispersal Pathways:	Potential impacts to groundwater and soil.
Summary:	Historical spills in the footprint of the RBTF are not evident, but cannot be ruled out.
Recommended Action:	Targeted surface and subsurface soil assessment.
Nor No.:	
Description:	RBTF: Aboveground Piping (AOC 25)

Dates of Operation:	Unknown to present
Wastes Previously and/or Currently Managed:	No wastes have been managed at RBTF, which has been used to store petroleum products since its construction.
Evidence of Release:	Several historical non-reportable spills.
Pollutant Dispersal Pathways:	Potential release to soil.
Summary:	No records from the previous owner are available for historical non-reportable spills.
Recommended Action:	Targeted surface and subsurface soil assessment.
Nor No.:	
Description:	RBTF: Former Truck Loading Terminal (AOC 26)
Dates of Operation:	Approximately mid-1960s to mid-2000s
Wastes Previously and/or Currently Managed:	No wastes have been managed at this area.
Evidence of Release:	The location is reported to have had a fire on September 28, 1993 with an associated release.
Pollutant Dispersal Pathways:	Potential release to soil.
Summary:	Remediation was conducted and the area closed under the Risk Reduction Rules. An Industrial Solid Waste Certification of Remediation was recorded in 2003 documenting that benzene, toluene, ethylbenzene, and total xylenes had been remediated to meet industrial/commercial standards.
Recommended Action:	Upon decommissioning of tanks, pads, sump, and associated infrastructure, evaluate need for additional delineation of affected soil.
Nor No.:	
Description:	RBTF: City of Pasadena Laydown Storage Yard (AOC 27)
Dates of Operation:	Approximately 1980s/1990s to present
Wastes Previously and/or Currently Managed:	Unknown. Area is used as a storage yard by the City of Pasadena.
Evidence of Release:	Records from walk-through in 2024 noted visual

	evidence of possible hot mix asphalt on ground and of a concrete wash out area; empty small engine gas can, motor oil containers, pump sprayers, a television, trash, and several tires.
Pollutant Dispersal Pathways:	Potential release to soil.
Summary:	Contents are unknown; however, a release cannot be ruled out based on current and past use and observations during the site walk-through in 2024.
Recommended Action:	Targeted surface and subsurface soil assessment.
New AOCs	
Nor No.:	
Description:	West Property Aboveground Tanks and Surface Conveyance Feature (AOC 28)
Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Unknown
Evidence of Release:	No evidence of a release; however, feature is not documented and appears to have been used for conveying liquids.
Pollutant Dispersal Pathways:	Not applicable
Summary:	This feature was observed during a visual site inspection (VSI) in 2024, but no records of historic use, releases, or cleanups were found.
Recommended Action:	Prepare a Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Work Plan (RFI) for further investigation of this area.
Nor No.:	
Description:	West Property Former Roof Shingle Production (AOC 29)
Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Unknown
Evidence of Release:	No evidence of release; however, no records of this operation are available.
Pollutant Dispersal Pathways:	Not applicable
Summary:	Based on current operator knowledge, a former roof shingle manufacturing process occupied the

	footprint of this location. No additional records for this operation were available. During the VSI, depressions in the ground surface were observed and may indicate the removal of a subsurface feature. In addition, disturbed ground was observed indicating that an attempt to re-grade or restore the surface was made.
Recommended Action:	Prepare a RFI Work Plan for further investigation of this area.
Nor No.:	
Description:	South Property Fuel Storage (AOC 30)
Dates of Operation:	Some period of time between 1953 and 2006
Wastes Previously and/or Currently Managed:	No wastes are known to have been managed at this location.
Evidence of Release:	No evidence of a release; however, fuel may have been dispensed in an area without secondary containment.
Pollutant Dispersal Pathways:	Not applicable.
Summary:	This location appears to have been used to store fuel in aboveground tanks and dispensed fuel at the same location. While it is likely that the fuel stored was within secondary containment, the dispensing location appears to have been adjacent to a concrete slab with no secondary containment.
Recommended Action:	Prepare a RFI Work Plan for further investigation of this area.
Nor No.:	
Description:	South Property Former Concrete Batch Plant Equipment (AOC 31)
Dates of Operation:	Some period of time between 1953 and 2006
Wastes Previously and/or Currently Managed:	No wastes are known to have been managed at this location.
Evidence of Release:	No evidence of a release.
Pollutant Dispersal Pathways:	Not applicable.
Summary:	Poly tanks formerly located in this area are reported to have stored chemicals for the concrete batch

	mixing process. A limited Phase II assessment conducted by ESDM, Inc. reported detectable concentration of lead at 1 to 2 ft below ground surface in one soil boring. ESDM reported that detected lead concentrations were below TCEQ specific background concentrations. Based on the size of the former footprint, adequate delineation horizontally does not appear to have been achieved, likely due to the physical presence of the tanks at time of the Phase II assessment. Currently the tanks no longer exist; therefore, additional lateral characterization can be achieved.
Recommended Action:	Prepare a RFI Work Plan for further investigation of this area.
Nor No.:	
Description:	South Property Former Pond 1 (AOC 32)
Dates of Operation:	Some period of time between 1953 and 2006
Wastes Previously and/or Currently Managed:	Unknown
Evidence of Release:	No evidence of release; however, complete history of use is not available.
Pollutant Dispersal Pathways:	Not applicable.
Summary:	This approximately 125 by 200-foot former pond on the north side of the South Property near Crown Street may have been used for wastewater and/or stormwater collection. As of 2024, the location of the pond was not evident during a VSI.
Recommended Action:	Prepare a RFI Work Plan for further investigation of this area.
Nor No.:	
Description:	South Property Former Pond 2 (AOC 33)
Dates of Operation:	Some period of time between 1953 and 2006
Wastes Previously and/or Currently Managed:	Unknown
Evidence of Release:	No evidence of release; however, complete history of use is not available.
Pollutant Dispersal Pathways:	Not applicable.
Summary:	This approximately 75 by 125-foot former pond on

	the east side of the South Property may have been used for wastewater and/or stormwater collection. As of 2024, the location of the pond was not evident during a VSI.
Recommended Action:	Prepare a RFI Work Plan for further investigation of this area.
Nor No.:	
Description:	South Property Former Pond 3 (AOC 34)
Dates of Operation:	Some period of time between 1953 and 1995
Wastes Previously and/or Currently Managed:	Unknown
Evidence of Release:	No evidence of release; however, complete history of use is not available.
Pollutant Dispersal Pathways:	Not applicable.
Summary:	This approximately 250 by 375-foot former pond on the southeast side of the South Property may have been used for wastewater and/or stormwater collection. As of 2006, the location of the pond was not evident during a VSI.
Recommended Action:	Prepare a RFI Work Plan for further investigation of this area.
Nor No.:	
Description:	South Property Equipment Washdown Pad and Sump (AOC 35)
Dates of Operation:	Some period of time between 1953 and 2006
Wastes Previously and/or Currently Managed:	Unknown
Evidence of Release:	No evidence of a release.
Pollutant Dispersal Pathways:	Not applicable.
Summary:	A former equipment washdown pad and associated sump were located on the northern property line of the South Property. During the limited Phase II performed by ESDM, a sample was collected of sludge and water from within the sump and analyzed for select metals, total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene, and total xylenes (collectively BTEX). Sampling the contents of the sump appears to be

	only an initial screening of the sludge for waste disposal. Characterization of surface or subsurface soil adjacent to and below the former sump and washdown pad has not been completed.
Recommended Action:	Prepare a RFI Work Plan for further investigation of this area.

Clean Copy Preliminary Review Checklists

Preliminary Review Facility Checklist

Facility: Pasadena Refinery City: Pasadena

ISW Reg No: 30311 Date: May 15, 2025

Permit No: 50112 Reviewer:

EPA ID No: TXD008091290

A. Waste Management Units:

RCRA Regulated Units:

NOR No.	Description	Status
001	Moat	Post-Closure Care
002	Stormwater Pond	Active – In Delay of Closure
004	Barrel Storage Yard	Closed
007	Bauxite Pond	Post-Closure Care

Solid Waste Management Units:

NOR No.	Description	Status
	Tank Fire Walls (consisting of 33 tanks: 1, 2, 47 (removed), 50, 51, 85, 97, 202, 203, 204, 206, 314 to 317, 319 to 327, 330 (formerly 207), 331, 332, 348, 811, 820, and 824 to 826)	SWMU 1. Active. Addressed in compliance plan.
	Buried Cell Near the Bauxite Pond	SWMU 2. Inactive. Addressed in compliance plan.
005	Contaminated Coke Waste Pile	SWMU 4. Inactive. NFA Approved 9/7/2006.
008	Never Used Roadfill	Active. No change since last permit renewal.
009	Never Used CPI Separator Sludge Tank	Active. No change since last permit renewal.
010	Temp. Hazardous Waste Container Storage Area Roll-Offs	Active. No change since last permit renewal.
011	Storage Bin	Closed
012	Storage Bin	Closed
	Area Immediately Surrounding the Bauxite Pond	SWMU 5. Inactive. NFA

NOR No.	Description	Status
		Approved 9/7/2006.
	Dehydrator Tank Fire Walls	SWMU 6. Active. Addressed in compliance plan.
	Maintenance Area Ditch	SWMU 7. Active. Addressed in compliance plan.
	Detol Pad	SWMU 8. Active. Addressed in compliance plan.
	Sandblast Grit Pile	SWMU 9. Active. NFA approved 9/7/2006.
	Groundwater Region 7	AOC 10. Addressed in compliance plan.
	Groundwater Regions 1, 2, 3, 4, 5, and 6	AOC 11. Addressed in compliance plan.
013	Tank 97 Storage Process Wastewater/ Stormwater Treatment	Active. Addressed in compliance plan.
014	CPI Separator	Active. No change since last permit renewal.
015	#2 Trap	SWMU 3. Active. NFA Approved 9/7/2006.
016	#3 Trap	Active. No change since last permit renewal.
017	Storage Bins	Closed
018	Storage Bins	Closed
019	Storage Bin for Oily Trash Only	Active. No change since last permit renewal.
020	Tank 400 Wastewater/Stormwater Management Unit	Active. No change since last permit renewal.
021	Container Storage Area Less than 90 Day Storage	Active. No change since last permit renewal.
022	Closed Sand Blast Grit Pile	Closed
023	Universal Waste Battery Storage	Closed

NOR No.	Description	Status
024	Weathered Tank Bottom Storage Area	Closed
025	Frac Tank	Active. No change since last permit renewal.
026	Container Storage Area for Platinum Catalyst	Active. No change since last permit renewal.
027	Portable Temporary CBM Tank	Closed
028	Portable Temporary CBM Tank	Closed
029	ARN Tank for Temporary Storage of ARN	Closed
030	Portable ARN Tank for Temporary Storage of ARN	Closed
031	Tank 51 (Wastewater Surge Capacity Tank)	Closed
032	65 Tank Wastewater/Stormwater Management Unit	Closed
033	Container Storage for Crushed Nonhazardous Fluorescent bulbs	Closed
034	Wastewater from Refining Process 321 Tank	Closure Request
035	Less Than 90 Day Drum Storage West Plant	Closed
036	Container Storage Area (West Plant) Less Than 90 Day Storage	Active. No change since last permit renewal.
037	Tank 250 Wastewater and Stormwater Storage as Part of WWT for Facility	Active. No change since last permit renewal.
038	Deluge System Impoundment	Active. No change since last permit renewal.
	Tanks 203 & 204	Inactive. New SWMU 12 added to compliance plan December 2023.
013	Tank 97	Inactive. New SWMU 13 added to compliance plan December 2023.
	Tank 830	Inactive. New SWMU 14 added to compliance plan December 2023.
	Tank 307	Inactive. New SWMU 15 added to compliance plan

NOR No.	Description	Status
		December 2023.
	RBTF Storm Water System	Active. New SWMU 23 added to compliance plan in this renewal.
	Historical Tank Footprint	Active. New AOC 24 added to compliance plan in this renewal.
	Aboveground Piping	Active. New AOC 25 added to compliance plan in this renewal.
	Former Truck Loading Terminal	Inactive. New AOC 26 added to compliance plan in this renewal.
	City of Pasadena Laydown Storage Yard	Active. New AOC 27 added to compliance plan in this renewal.
301	Dumpster (Cafeteria, Labs, Offices)	Closed
302	Dumpster (Machine Shops)	Closed
303	Dumpster (Evaporators)	Closed
304	Dumpster (Water Treatment Plant)	Closed
305	Dumpster (Carpenter Shop)	Closed
306	Dumpster (Storeroom)	Closed
307	Dumpster (Storeroom)	Closed
308	Dumpster (24 Machine Maintenance Shops)	Closed
309	Dumpster (24 Machine)	Closed
310	Dumpster (Contractor Hill Dumpster)	Closed
311	Roll-off Dumpster (24 Machine)	Closed
312	Roll-off Dumpster (24 Machine)	Closed
313	Roll-off Dumpster (24 Machine)	Closed
314	Roll-off Dumpster (24 Machine)	Closed
315	Roll-off Dumpster (Mobile Shop)	Closed

NOR No.	Description	Status
316	Roll-off Dumpster (Mobile Shop)	Closed
317	Roll-off Dumpster (Truck Staging Area)	Closed
318	Roll-off Dumpster (Storeroom Dumpster)	Closed
319	Waste piles in salvage yard	Active. New SWMU added to compliance plan October 2024.
320	Waste piles near paint shop	Active. New SWMU added to compliance plan October 2024.
321	Container Storage Area	Closed
322	Container Storage Area	Closed
323	Enclosed Dumpster for Asbestos Waste	Closed
324	Storage Area for Asbestos Containing Materials	Active. New SWMU added to compliance plan October 2024.
325	Safety-Kleen Parts Washer (Pump Shop)	Closed
326	Safety-Kleen Parts Washer (Mobile Shop)	Closed
327	Safety-Kleen Parts Washer (Mobile Shop)	Closed
401	NA	Closed
402	Storage Area for Asbestos Containing Material	Active. New SWMU added to compliance plan October 2024.
403	Container Storage Area (General Storeroom)	Closed
404	Miscellaneous Storage Container	Closed
405	Miscellaneous Storage Container	Closed
406	Trash Dumpsters	Closed
408	Dumpster for recaust process tank bottoms and associated piping scale from cleaning activities	Closed
409	Dumpster for recaust process tank bottoms and associated piping generated during cleanup activity	Closed
410	Miscellaneous Storage Container	Closed

NOR No.	Description	Status
411	Miscellaneous Storage Container	Closed
412	Miscellaneous Storage Container	Closed
413	Mill wide process waste water collection system	Active. No change since last permit renewal.
414	Container Storage Area (Hazardous Waste Paint Storage Room)	Closure In Accordance with RAP. New SWMU added to compliance plan October 2024.
415	Container Storage Area (Mobile Vehicle Maintenance Shop)	Closed
416	Miscellaneous Storage Container	Closed
417	Thermal oxidation process incinerator	Closure In Accordance with RAP. New SWMU added to compliance plan October 2024.
418	Wood waste pile and dumpsters	Closed
419	Dumpsters (Paper Machine)	Closed
420	Dumpsters (Mobil Shop)	Closed
421	Dumpsters (Salvage Yard)	Closed
422	Dumpsters (Cafeteria and General Office)	Closed
423	Turnaround / Outage Dumpsters	Closed
424	Salvage Yard Piles	Closure Report Submitted August 2023. New SWMU added to compliance plan October 2024.
425	Dumpsters (Paint Shop)	Closed
426	Pile near Paint Shop	Closure In Accordance with RAP. New SWMU added to compliance plan October 2024.
427	Abandoned Cooling Tower Basin	Closure Report Submitted August 2023. New SWMU added to compliance plan October 2024.

NOR No.	Description	Status
428	Main Sewer Dump Station	Closed
429	Maintenance Shop Dumpsters	Closed
430	Storeroom Dumpsters	Closed
	West Property: Aboveground Tanks and Surface Conveyance Feature	Inactive. New AOC 28 added to compliance plan in this renewal
	West Property: Former Roof Shingle Production Area	Inactive. New AOC 29 added to compliance plan in this renewal
	South Property: Former Fuel Storage Area	Inactive. New AOC 30 added to compliance plan in this renewal
	South Property: Former Concrete Batch Plant Equipment	Inactive. New AOC 31 added to compliance plan in this renewal
	South Property: Former Pond 1	Inactive. New AOC 32 added to compliance plan in this renewal
	South Property: Former Pond 2	Inactive. New AOC 33 added to compliance plan in this renewal
	South Property: Former Pond 3	Inactive. New AOC 34 added to compliance plan in this renewal
	South Property: Equipment Washdown Pad and Sump	Inactive. New AOC 35 added to compliance plan in this renewal

B. Reviewed Documents:

RCRA:	Located within TCEQ files
Part A _____	Located within TCEQ files
Part B _____	None
Permit _____	NOR
CERCLA:	
Inspection Reports:	

Enforcement Actions:

Exposure Information:

Other Information:

C. Summary:

See Unit Checklists

D. Recommended Action:

See Unit Checklists

Preliminary Review Unit Checklist

Facility: Pasadena Refinery City: Pasadena

ISW Reg No: 30311 Date: May 15, 2025

Permit No: 50112 Reviewer:

EPA ID No: TXD008091290

A. Nor No.:	301
B. Description:	Dumpster (8-cu. yds.); cafeteria, labs and offices
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, empty or crushed fiber, empty or crushed metal, construction debris, wood debris from mill.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	302
B. Description:	Dumpster (8-cu. yds.); machine shops
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, empty or crushed fiber, empty or crushed metal, construction debris, wood debris from mill.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	303
B. Description:	Dumpster (6-cu. yds.); evaporators (east side of powerhouse)
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.

Recommended Action:	No further action
A. Nor No.:	304
B. Description:	Dumpster (6-cu. yds.); water treatment plant
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	305
B. Description:	Dumpster (4-cu. yds); carpenter shop
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	306
B. Description:	Dumpster (8-cu. yds.); storeroom
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.

Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	307
B. Description:	Dumpster (8-cu. yds.); storeroom
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	308
B. Description:	Dumpster (8-cu. yds.); 24 machine maintenance shops
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	309

B. Description:	Dumpster (6-cu. yds.); 24 machine N
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Wood debris, construction debris, plant refuse.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	310
B. Description:	Dumpster (8-cu. yds.); contractor hill dumpster
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	311
B. Description:	Roll-off dumpster (30-cu. yds.); 24 machine NW corner
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.

Recommended Action:	No further action
A. Nor No.:	312
B. Description:	Roll-off dumpster (30-cu. yds.); 24 machine NW corner
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	313
B. Description:	Roll-off dumpster (30-cu. yds.); 24 machine NW corner
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	314
B. Description:	Roll-off dumpster (40-cu. yds.); 24 machine SW corner
C. Dates of Operation:	Unknown

Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	315
B. Description:	Roll-off dumpster (30-cu. yds.); mobile shop S1
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	316
B. Description:	Roll-off dumpster (30-cu. yds.); mobile shop S2
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action

A. Nor No.:	317
B. Description:	Roll-off dumpster (30-cu. yds.); truck staging area
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Wood debris from mill, construction debris, plant refuse.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	318
B. Description:	Roll-off dumpster (30-cu. yds.); storeroom dumpster
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, wood debris from mill, empty or crushed metal, construction debris, empty or crushed fiber.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	319
B. Description:	Waste Piles in Salvage Yard
C. Dates of Operation:	1999 - present
Wastes Previously and/or Currently Managed:	Sandblasting Waste
Evidence of Release:	According to the 2011 APAR, soil samples collected from soil borings B-41/B-46 to assess hexavalent chromium, PP metals, SVOCs, asbestos,

	sulfate/sulfide, and pH. Additional samples located nearby, but may not be associated with PM019/PP024 include soil borings B-4-A (MW-4) and B-5-A (MW-5) and delineation borings B-42, B-43, and B-45. Analysis includes PCBs, metals, VOCs, SVOCs and dioxin/furans.
Pollutant Dispersal Pathways:	Potential for soil leaching to groundwater.
Summary:	2011 APAR indicated that this area was addressed under Texas Risk Reduction Program (TRRP) rules. Surface soil, subsurface soil, and groundwater samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), dioxins and furans, metals, cyanide, sulfide, and ammonium. No COCs in surface soil exceeded commercial/industrial PCL. No COCs in subsurface soil exceeded applicable residential or commercial/industrial PCL. No detected COC concentrations reported in groundwater exceed their residential or commercial/industrial groundwater PCLs. Mercury exceeded soil leaching to groundwater PCL in a single sample; however, the corresponding mercury SPLP leachate result did not exceed the groundwater ingestion PCL. Beryllium and lead were not detected above their Tier 1 PCLs for the soil leaching to groundwater pathway; however, SPLP leachate results exceeded their PCL for the groundwater ingestion pathway. Groundwater sampling results confirmed that beryllium, lead, and mercury were not detected in groundwater at concentrations above their applicable Tier 1 residential or commercial/industrial groundwater PCLs.
Recommended Action:	No further action. Closure request submitted 8/31/2023.
A. Nor No.:	320
B. Description:	Waste Piles Near Paint Shop
C. Dates of Operation:	1999 - present
Wastes Previously and/or Currently Managed:	Sandblasting Waste
Evidence of Release:	The 2017 RAER noted Soil GWSoilIng PCL exceedances for lead and benz[a]anthracene. Soil TotSoilComb PCL exceedances of benz(a)anthracene, benzo(a)pyrene, and dibenz(a,h)anthracene documented in the 2012 RAP.

Pollutant Dispersal Pathways:	Potential migration from soil to groundwater.
Summary:	Area is co-located with PP026 and adjacent to PP014. Waste pile was also used by Pasadena Paper Company, LP. This unit was evaluated in the 2012 RAP, the 2017 RAER, and the 2020 RAER and a deed restriction and long-term groundwater monitoring are in place for this portion of the property.
Recommended Action:	Continue long-term groundwater monitoring.
A. Nor No.:	321
B. Description:	Container storage area; drum and tote bin storage area for disposal; drum storage area for material from spill clean-up; and battery storage prior to disposal.
C. Dates of Operation:	Unknown
Wastes Managed:	Organic and inorganic papermaking waste, petroleum contaminated waste, empty or crushed metal, empty or crushed fiber, debris from mill cleanup.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 8/27/2010.
Recommended Action:	No further action
A. Nor No.:	322
B. Description:	Container storage area; area in storeroom for hazardous wastes.
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Caustic and acidic aqueous waste, Safety-Kleen waste, organic paint, ink, lacquer.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 8/27/2010.

Recommended Action:	No further action
A. Nor No.:	323
B. Description:	40-cu. yds. fully enclosed dumpster for asbestos waste.
C. Dates of Operation:	1999 - 2008
Wastes Previously and/or Currently Managed:	Asbestos
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 5/6/2008.
Recommended Action:	No further action
A. Nor No.:	324
B. Description:	Storage Area for Asbestos Containing Materials
C. Dates of Operation:	1999 - present
Wastes Previously and/or Currently Managed:	Transite sheeting, asbestos insulation, PCB oil low concentration.
Evidence of Release:	No; but soil sampling has not been completed under existing 20-inch concrete foundation.
Pollutant Dispersal Pathways:	No release identified; if a release to soil has occurred, there is potential for downward migration into groundwater.
Summary:	PRSI proposed using the existing 20-inch foundation of PM024/PP002 as an engineered cap until such time that demolition would facilitate soil assessment. The cap is inspected every six months by a professional engineer (P.E.) to ensure that the cap continues to effectively prevent exposure to and leaching of the potentially contaminated soil. Container co-located with PM024.
Recommended Action:	Continue inspections until closure in accordance with 2012 RAP is completed.
A. Nor No.:	325

B. Description:	Tank, 30-gallons; Safety-Kleen parts washer; pump shop
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Solvents and residue from parts washing
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	326
B. Description:	Tank, 30-gallons; Safety-Kleen parts washer; mobile shop
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Solvents and residue from parts washing
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	327
B. Description:	Tank, 30-gallons; Safety-Kleen parts washer; mobile shop
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Solvents and residue from parts washing
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	No evidence of release. Unit is no longer in use. TCEQ closure approved 3/11/2010.
Recommended Action:	No further action

A. Nor No.:	401
B. Description:	Closed Landfill
C. Dates of Operation	Unknown
Wastes Previously and/or Currently Managed:	Unknown
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	According to the 2011 APAR, additional soil samples were collected to assess sulfate/sulfide and pH. No exceedances observed. TCEQ approved closure prior to 2015; exact date uncertain.
Recommended Action:	No further action
A. Nor No.:	402
B. Description:	Storage Area for Asbestos Containing Material
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Asbestos Containing Material, PCB waste and transite sheeting.
Evidence of Release:	No; but soil sampling has not been completed under existing 20-inch concrete foundation.
Pollutant Dispersal Pathways:	No release identified; if a release to soil has occurred, there is potential for downward migration into groundwater.
Summary:	PRSI proposed using the existing 20-inch foundation of PM024/PP002 as an engineered cap until such time that demolition would facilitate soil assessment. The cap is inspected every six months by a professional engineer (P.E.) to ensure that the cap continues to effectively prevent exposure to and leaching of the potentially contaminated soil. Container co-located with PM024.
Recommended Action:	Closure in accordance with 2012 RAP
A. Nor No.:	403
B. Description:	Container Storage Area (General Storeroom)
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently	Grease, organic paint, ink, lacquer, spent solid

Managed:	filters, railroad ties, waste polymer, non-hazardous sandblasting, waste oil, refractory debris, lubricating oil, paper additives, acid spill residue, lab packs, paint thinner, empty or crushed metal, ethylene glycol-based products, waste glue, used paint, biocide, slime, defoaming agents, wood debris, latex waste, used oil filters, waste trial material, batteries or battery parts, petroleum contaminated waste, cleanup of pulping liquor.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site. TCEQ approved closure 8/27/2010.
Recommended Action:	No further action
A. Nor No.:	404
B. Description:	Miscellaneous Storage Container
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Asbestos, transite sheeting
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	40-cu. yds fully enclosed dumpster for asbestos. Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site. TCEQ approved closure 5/6/2008.
Recommended Action:	No further action
A. Nor No.:	405
B. Description:	Miscellaneous Storage Containers
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Naphtha, asbestos, transite sheeting
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable

Summary:	40-cu. yds. fully enclosed dumpster, also used by Pasadena Paper Company LP. Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site. TCEQ approved closure 8/27/2010.
Recommended Action:	No further action
A. Nor No.:	406
B. Description:	Trash Dumpsters
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Supp refuse, contaminated soil, empty or crushed metal, non-hazardous sandblasting, railroad ties, plant refuse, metal scale, filings, wood debris, refractory debris, construction debris, general trash
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	Dumpsters were leased by Pasadena Paper Company. No evidence of release. TCEQ approved closure 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	408
B. Description:	Miscellaneous Storage Containers
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Recaust process tank bottom sludge and associated piping scale from cleaning activities, contaminated soil, solidified slurry
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	TCEQ approved closure 5/6/2008.
Recommended Action:	No further action
A. Nor No.:	409

B. Description:	Miscellaneous Storage Containers
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Recaust process tank bottoms and associated piping scale from cleaning activities.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	2011 RAP indicates that surface soil sample SS-1 was collected from Miscellaneous Storage Container WMU PP009 as part of WMU closure activities in April 2009. TCEQ approved closure 3/11/2010.
Recommended Action:	Complete RFI for this area
A. Nor No.:	410
B. Description:	Miscellaneous Storage Containers. 30-gallons “Safety Kleen” Parts Washer (Pump Shop).
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Naphtha
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	Equipment was operated by the Pasadena River Paper CO LP (1/20/99). No evidence of release. TCEQ approved closure 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	411
B. Description:	Miscellaneous Storage Containers. 30-gallons “Safety Kleen” Parts Washer (Mobile Shop).
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Naphtha
Evidence of Release:	COCs that exceeded ALs in soil include antimony, benz(a)anthracene, benzo(b)fluoranthene, dibenz(a,h)anthracene, cadmium, copper, lead, dioxin/furan, selenium, and zinc. 2011 APAR indicates that soil impacts in this area are likely associated with historic painting and debris piles in

	the area.
Pollutant Dispersal Pathways:	Potential for migration from soil to groundwater.
Summary:	TCEQ approved closure 3/11/2010. This unit was evaluated in the 2011 APAR and a deed restriction and long-term groundwater monitoring are in place for this portion of the property.
Recommended Action:	Incorporate long-term groundwater monitoring into permit renewal application to be submitted in 2024.
A. Nor No.:	412
B. Description:	Miscellaneous Storage Container. 30-gallons “Safety Kleen” Parts Washer (Cutter Shop).
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Naphtha
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	Equipment was by the Pasadena River Paper CO LP (1/20/99). No evidence of release. TCEQ approved closure 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	413
B. Description:	Mill Wide Process Waste Water Collection System
C. Dates of Operation:	Unknown to present
Wastes Previously and/or Currently Managed:	Pulp, wood fiber, caustic aqueous waste, acidic and non-acidic aqueous wastewater, tall oil organic sludge, solidified slurry, neutralized HC1 and H2SO4 tank slurry, oily sludge, defoaming agents, acid spill residue, inorganic sludge, ethylene glycol-based waste, waste trial material, solidified slurry of calcium, waste polymer, reactive sludge, paper additives, brine solution, cleanup of pulping liquor, paper machine felt cleaner, effluent isolation tank, acid buggy.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable

Summary:	No evidence of release. Pulp Mill was mothballed at time of ownership change 1/20/99. Between that time and 2005 the WWTP was used to treat intake water (raw water from the Trinity River) from the City of Houston. Treated water was then used to support the Paper Mill processes. In 2005 the WWTP was repurposed to store water for fire suppression. Water is stored in three bays that are maintained in accordance with a City of Houston agreement.
Recommended Action:	WMU in use. Request TCEQ to update NOR to reflect current use.
A. Nor No.:	414
B. Description:	Container Storage Area (Hazardous Waste Paint Storage Room)
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Organic paint, ink, lacquer, paint thinner or petroleum, acid spill residue - contains, empty or crushed metal.
Evidence of Release:	COCs that exceeded ALs in soil include antimony, benz(a)anthracene, benzo(b)fluoranthene, dibenz(a,h)anthracene, cadmium, copper, lead, dioxin/furan, selenium, and zinc. 2011 APAR indicates that soil impacts in this area are likely associated with historic painting and debris piles in the area.
Pollutant Dispersal Pathways:	Potential for migration from soil to groundwater.
Summary:	TCEQ approved closure 3/11/2010. This unit was evaluated in the 2011 APAR and a deed restriction and long-term groundwater monitoring are in place for this portion of the property.
Recommended Action:	Incorporate long-term groundwater monitoring into permit renewal application to be submitted in 2024.
A. Nor No.:	415
B. Description:	Container storage area located at mobile vehicle maintenance shop.
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Batteries or battery parts, waste oil, ethylene glycol-based waste, empty or crushed metal, spent solid filters

Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	NA
Summary:	No evidence of release. TCEQ approved closure 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	416
B. Description:	Miscellaneous Storage Container. 40-cu. yds. open top dumpster.
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Metal scale, filings, empty or crushed metal
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	NA
Summary:	No evidence of release. TCEQ approved closure 5/6/2008.
Recommended Action:	No further action
A. Nor No.:	417
B. Description:	Thermal Oxidation Process Incinerator
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Inorganic gases from pulp
Evidence of Release:	2011 APAR indicated COCs that exceeded ALs include antimony, arsenic, benzo(a)pyrene, benzo(fluoranthene, cadmium, copper, nickel, selenium, zinc, and lead. Soil impacts in this area are likely associated with former debris piles in the area.
Pollutant Dispersal Pathways:	Potential for migration from soil to groundwater and surface water (Little Vince and Vince Bayous).
Summary:	This unit was evaluated in the 2011 APAR and a deed restriction and long-term groundwater monitoring are in place for this portion of the property. In response to the 2011 APAR, TCEQ requested more sampling to show Little Vince and Vince Bayous have not been impacted by COCs. In the 2015 Assessment Report, results indicate that COCs detected in surface water and sediment in the

	Little Vince Bayou are not associated with historical operations at the site. No additional ecological evaluation of the Little Vince Bayou is warranted based on the result of this assessment. Annual groundwater monitoring reports will continue to be submitted.
Recommended Action:	Incorporate long-term groundwater monitoring into permit renewal application to be submitted in 2024.
A. Nor No.:	418
B. Description:	Wood Waste Pile and Dumpsters
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Wood
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	Waste Pile and Dumpsters removed when Pump Mill was mothballed. No evidence of release. TCEQ approved closure 5/6/2008.
Recommended Action:	No further action
A. Nor No.:	419
B. Description:	Dumpsters
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Wood fiber and debris
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	Dumpsters located in NW corner of 24 Paper Machine. Dumpsters used and managed by Pasadena Paper Company, LP. No evidence of release. TCEQ approved closure 5/6/2008.
Recommended Action:	No further action
A. Nor No.:	420
B. Description:	Dumpsters

C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Construction debris, empty or crushed metal, supp refuse, wood debris, plant refuse.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	Dumpsters located South of Mobil Shop. Dumpsters leased and used by Pasadena Paper Company, LP. No evidence of release. TCEQ approved closure 5/6/2008.
Recommended Action:	No further action
A. Nor No.:	421
B. Description:	Dumpsters
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Metal scale, filings, plant refuse, empty or crushed metal, refractory debris, wood debris, construction debris.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	Dumpsters located in Salvage Yard. Dumpsters leased and used by Pasadena Paper Company, LP. No evidence of release. TCEQ approved closure 5/6/2008.
Recommended Action:	No further action
A. Nor No.:	422
B. Description:	Dumpsters
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Supp refuse, general office trash.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	Dumpsters located in Cafeteria and General Office Waste. Dumpsters leased and used by Pasadena Paper Company, LP. No evidence of release. TCEQ

	approved closure 5/6/2008.
Recommended Action:	No further action
A. Nor No.:	423
B. Description:	Turnaround/Outage Dumpsters
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Contaminated soil, recaust tank bottom sludge, construction debris, inorganic sludge, solidified calcium slurry, paper machine/pulp dryer, wood fiber, refractory debris.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	In service temporarily during major plant shutdowns, turnarounds and outages. No evidence of release. TCEQ approved closure 5/6/2008.
Recommended Action:	No further action
A. Nor No.:	424
B. Description:	Salvage Yard Piles
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Railroad ties - old railroad, metal scale, filings, empty or crushed metal, wood debris from mill, debris-construction, soil – contaminated.
Evidence of Release:	Exceedance of soil leaching to groundwater PCL for mercury in a surface soil sample. Exceedance of groundwater ingestion PCL for beryllium and lead in Synthetic Precipitation Leaching Procedure (SPLP) leachate results.
Pollutant Dispersal Pathways:	Potential for soil leaching to groundwater.
Summary:	2011 APAR indicated that this area was addressed under Texas Risk Reduction Program (TRRP) rules. Surface soil, subsurface soil, and groundwater samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), dioxins and furans, metals, cyanide, sulfide, and ammonium. No COCs in surface soil exceeded commercial/industrial PCL. No COCs in subsurface

	soil exceeded applicable residential or commercial/industrial PCL. No detected COC concentrations reported in groundwater exceed their residential or commercial/industrial groundwater PCLs. Mercury exceeded soil leaching to groundwater PCL in a single sample; however, the corresponding mercury SPLP leachate result did not exceed the groundwater ingestion PCL. Beryllium and lead were not detected above their Tier 1 PCLs for the soil leaching to groundwater pathway; however, SPLP leachate results exceeded their PCL for the groundwater ingestion pathway. Groundwater sampling results confirmed that beryllium, lead, and mercury were not detected in groundwater at concentrations above their applicable Tier 1 residential or commercial/industrial groundwater PCLs.
Recommended Action:	No further action. Closure request submitted 8/31/2023.
A. Nor No.:	425
B. Description:	Dumpsters
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Non-hazardous sandblasting waste
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	Dumpsters located near paint shop SW corner of facility. Dumpster leased and used by Pasadena Paper Company, LP. No evidence of release. TCEQ approved closure 5/6/2008.
Recommended Action:	No further action
A. Nor No.:	426
B. Description:	Piles Near Paint Shop
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Non-hazardous sandblasting, wood debris from mill, pulp, wood fiber rejected, railroad ties - old railroad, debris-construction.
Evidence of Release:	The 2017 RAER noted Soil GWSoilIng PCL exceedances for lead and benz[a]anthracene. Soil

	TotSoilComb PCL exceedances of benz(a)anthracene, benzo(a)pyrene, and dibenz(a,h)anthracene documented in the 2012 RAP.
Pollutant Dispersal Pathways:	Potential for migration from soil to groundwater.
Summary:	Area is co-located with PM020 and adjacent to PP014. Waste pile was also used by Pasadena Paper Company, LP. This unit was evaluated in the 2012 RAP, the 2017 RAER, and the 2020 RAER and a deed restriction and long-term groundwater monitoring are in place for this portion of the property.
Recommended Action:	Incorporate long-term groundwater monitoring into permit renewal application to be submitted in 2024.
A. Nor No.:	427
B. Description:	Abandoned Cooling Tower Basin
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Debris-construction, contaminated soil.
Evidence of Release:	No evidence of release noted; however, potential for ammonium in surface and subsurface soil at cooling tower location.
Pollutant Dispersal Pathways:	Potential for soil contamination to migrate to groundwater.
Summary:	Based on the use of PP027 as a cooling water tower, analyzed for ammonium in surface and subsurface soils. Ammonium concentrations reported in surface soil are below its applicable Tier 1 residential and commercial/industrial surface soil PCLs. Ammonium concentrations reported in subsurface soil are below its applicable Tier 1 residential and commercial/industrial subsurface soil PCLs. Ammonium SPLP concentration does not exceed its secondary maximum contaminant level (MCL) or its Tier 1 residential or commercial/industrial groundwater to ambient air PCL.
Recommended Action:	Closure in accordance with request submitted on 8/31/2023.
A. Nor No.:	428

B. Description:	Main Sewer Dump Station
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Waste glue, latex waste, defoaming agents, waste polymer, neutralized HC1 and H2SO4, inorganic sludge, solidified calcium slurry, paper machine/pulp dryer, recaust tank bottom sludge, paper additives, pulp, woof fiber, waste trial material
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable
Summary:	Station is located west side of facility near 24 Paper Machine Dry End maintenance shop. No evidence of release. TCEQ approved closure on 3/11/2010.
Recommended Action:	No further action
A. Nor No.:	429
B. Description:	Maintenance Shop Dumpsters
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, construction debris, wood debris from mill.
Evidence of Release:	No evidence of a release
Pollutant Dispersal Pathways:	Not applicable.
Summary:	Dumpsters located N of BSW unit. Dumpsters were leased and used by Pasadena Paper Company, LP. No evidence of release. TCEQ approved closure 5/6/2008.
Recommended Action:	No further action
A. Nor No.:	430
B. Description:	Storeroom Dumpsters
C. Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Plant refuse, pulp, wood fiber, wood debris from mill.
Evidence of Release:	No evidence of a release

Pollutant Dispersal Pathways:	Not applicable
Summary:	Dumpsters were leased and used by Pasadena Paper Company, LP. No evidence of release. TCEQ approved closure 5/6/2008.
Recommended Action:	No further action

Nor No.:	
Description:	RBTF: Storm Water System (SWMU 23)
Dates of Operation:	Unknown to present
Wastes Previously and/or Currently Managed:	Stormwater and clean hydrostatic test water
Evidence of Release:	A reportable release that occurred on October 15, 2020 was excavated; however, detections of arsenic, lead, mercury, benzene, toluene, and TPH at concentrations above the Texas Risk Reduction Program PCL for $^{GW}Soil_{Ing}$ pathway remained, attributed to historical releases.
Pollutant Dispersal Pathways:	Potential for soil leaching to groundwater.
Summary:	Various non-reportable hydrocarbon releases in the vicinity of the stormwater ditch have affected soil along the banks of the ditch.
Recommended Action:	Additional assessment to confirm removal of impacts to soil.
Nor No.:	
Description:	RBTF: Historical Tank Footprint (AOC 24)
Dates of Operation:	Approximately 1940 to present
Wastes Previously and/or Currently Managed:	No wastes have been managed at RBTF, which has been used to store petroleum products since its construction.
Evidence of Release:	No evidence of spill releases or cleanup activities were identified in the RBTF RFA; however, the previous owner did not provide documentation of inspections and maintenance of various historical tanks that precludes possible releases.
Pollutant Dispersal Pathways:	Potential impacts to groundwater and soil.
Summary:	Historical spills in the footprint of the RBTF are not evident, but cannot be ruled out.
Recommended Action:	Targeted surface and subsurface soil assessment.
Nor No.:	
Description:	RBTF: Aboveground Piping (AOC 25)
Dates of Operation:	Unknown to present
Wastes Previously and/or Currently Managed:	No wastes have been managed at RBTF, which has

	been used to store petroleum products since its construction.
Evidence of Release:	Several historical non-reportable spills.
Pollutant Dispersal Pathways:	Potential release to soil.
Summary:	No records from the previous owner are available for historical non-reportable spills.
Recommended Action:	Targeted surface and subsurface soil assessment.
Nor No.:	
Description:	RBTF: Former Truck Loading Terminal (AOC 26)
Dates of Operation:	Approximately mid-1960s to mid-2000s
Wastes Previously and/or Currently Managed:	No wastes have been managed at this area.
Evidence of Release:	The location is reported to have had a fire on September 28, 1993 with an associated release.
Pollutant Dispersal Pathways:	Potential release to soil.
Summary:	Remediation was conducted and the area closed under the Risk Reduction Rules. An Industrial Solid Waste Certification of Remediation was recorded in 2003 documenting that benzene, toluene, ethylbenzene, and total xylenes had been remediated to meet industrial/commercial standards.
Recommended Action:	Upon decommissioning of tanks, pads, sump, and associated infrastructure, evaluate need for additional delineation of affected soil.
Nor No.:	
Description:	RBTF: City of Pasadena Laydown Storage Yard (AOC 27)
Dates of Operation:	Approximately 1980s/1990s to present
Wastes Previously and/or Currently Managed:	Unknown. Area is used as a storage yard by the City of Pasadena.
Evidence of Release:	Records from walk-through in 2024 noted visual evidence of possible hot mix asphalt on ground and of a concrete wash out area; empty small engine gas can, motor oil containers, pump sprayers, a

	television, trash, and several tires.
Pollutant Dispersal Pathways:	Potential release to soil.
Summary:	Contents are unknown; however, a release cannot be ruled out based on current and past use and observations during the site walk-through in 2024.
Recommended Action:	Targeted surface and subsurface soil assessment.
New AOCs	
Nor No.:	
Description:	West Property Aboveground Tanks and Surface Conveyance Feature (AOC 28)
Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Unknown
Evidence of Release:	No evidence of a release; however, feature is not documented and appears to have been used for conveying liquids.
Pollutant Dispersal Pathways:	Not applicable
Summary:	This feature was observed during a visual site inspection (VSI) in 2024, but no records of historic use, releases, or cleanups were found.
Recommended Action:	Prepare a Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Work Plan (RFI) for further investigation of this area.
Nor No.:	
Description:	West Property Former Roof Shingle Production (AOC 29)
Dates of Operation:	Unknown
Wastes Previously and/or Currently Managed:	Unknown
Evidence of Release:	No evidence of release; however, no records of this operation are available.
Pollutant Dispersal Pathways:	Not applicable
Summary:	Based on current operator knowledge, a former roof shingle manufacturing process occupied the footprint of this location. No additional records for this operation were available. During the VSI, depressions in the ground surface were observed

	and may indicate the removal of a subsurface feature. In addition, disturbed ground was observed indicating that an attempt to re-grade or restore the surface was made.
Recommended Action:	Prepare a RFI Work Plan for further investigation of this area.
Nor No.:	
Description:	South Property Fuel Storage (AOC 30)
Dates of Operation:	Some period of time between 1953 and 2006
Wastes Previously and/or Currently Managed:	No wastes are known to have been managed at this location.
Evidence of Release:	No evidence of a release; however, fuel may have been dispensed in an area without secondary containment.
Pollutant Dispersal Pathways:	Not applicable.
Summary:	This location appears to have been used to store fuel in aboveground tanks and dispensed fuel at the same location. While it is likely that the fuel stored was within secondary containment, the dispensing location appears to have been adjacent to a concrete slab with no secondary containment.
Recommended Action:	Prepare a RFI Work Plan for further investigation of this area.
Nor No.:	
Description:	South Property Former Concrete Batch Plant Equipment (AOC 31)
Dates of Operation:	Some period of time between 1953 and 2006
Wastes Previously and/or Currently Managed:	No wastes are known to have been managed at this location.
Evidence of Release:	No evidence of a release.
Pollutant Dispersal Pathways:	Not applicable.
Summary:	Poly tanks formerly located in this area are reported to have stored chemicals for the concrete batch mixing process. A limited Phase II assessment conducted by ESDM, Inc. reported detectable concentration of lead at 1 to 2 ft below ground

	surface in one soil boring. ESDM reported that detected lead concentrations were below TCEQ specific background concentrations. Based on the size of the former footprint, adequate delineation horizontally does not appear to have been achieved, likely due to the physical presence of the tanks at time of the Phase II assessment. Currently the tanks no longer exist; therefore, additional lateral characterization can be achieved.
Recommended Action:	Prepare a RFI Work Plan for further investigation of this area.
Nor No.:	
Description:	South Property Former Pond 1 (AOC 32)
Dates of Operation:	Some period of time between 1953 and 2006
Wastes Previously and/or Currently Managed:	Unknown
Evidence of Release:	No evidence of release; however, complete history of use is not available.
Pollutant Dispersal Pathways:	Not applicable.
Summary:	This approximately 125 by 200-foot former pond on the north side of the South Property near Crown Street may have been used for wastewater and/or stormwater collection. As of 2024, the location of the pond was not evident during a VSI.
Recommended Action:	Prepare a RFI Work Plan for further investigation of this area.
Nor No.:	
Description:	South Property Former Pond 2 (AOC 33)
Dates of Operation:	Some period of time between 1953 and 2006
Wastes Previously and/or Currently Managed:	Unknown
Evidence of Release:	No evidence of release; however, complete history of use is not available.
Pollutant Dispersal Pathways:	Not applicable.
Summary:	This approximately 75 by 125-foot former pond on the east side of the South Property may have been used for wastewater and/or stormwater collection. As of 2024, the location of the pond was not evident

	during a VSI.
Recommended Action:	Prepare a RFI Work Plan for further investigation of this area.
Nor No.:	
Description:	South Property Former Pond 3 (AOC 34)
Dates of Operation:	Some period of time between 1953 and 1995
Wastes Previously and/or Currently Managed:	Unknown
Evidence of Release:	No evidence of release; however, complete history of use is not available.
Pollutant Dispersal Pathways:	Not applicable.
Summary:	This approximately 250 by 375-foot former pond on the southeast side of the South Property may have been used for wastewater and/or stormwater collection. As of 2006, the location of the pond was not evident during a VSI.
Recommended Action:	Prepare a RFI Work Plan for further investigation of this area.
Nor No.:	
Description:	South Property Equipment Washdown Pad and Sump (AOC 35)
Dates of Operation:	Some period of time between 1953 and 2006
Wastes Previously and/or Currently Managed:	Unknown
Evidence of Release:	No evidence of a release.
Pollutant Dispersal Pathways:	Not applicable.
Summary:	A former equipment washdown pad and associated sump were located on the northern property line of the South Property. During the limited Phase II performed by ESDM, a sample was collected of sludge and water from within the sump and analyzed for select metals, total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene, and total xylenes (collectively BTEX). Sampling the contents of the sump appears to be only an initial screening of the sludge for waste disposal. Characterization of surface or subsurface soil adjacent to and below the former sump and

	washdown pad has not been completed.
Recommended Action:	Prepare a RFI Work Plan for further investigation of this area.

Texas Commission on Environmental Quality

Waste Permits Division Correspondence Cover Sheet

Date: August 7, 2025
Facility Name: Pasadena Refining System, Inc.
Permit or Registration No.: HW 50112

Nature of Correspondence:
☐ Initial/New
☒ Response/Revision to TCEQ Tracking No.: None (from subject line of TCEQ letter regarding initial submission)

Affix this cover sheet to the front of your submission to the Waste Permits Division. Check appropriate box for type of correspondence. Contact WPD at (512) 239-2335 if you have questions regarding this form.

Table 1 - Municipal Solid Waste Correspondence

Applications	Reports and Notifications
☐ New Notice of Intent	☐ Alternative Daily Cover Report
☐ Notice of Intent Revision	☐ Closure Report
☐ New Permit (including Subchapter T)	☐ Compost Report
☐ New Registration (including Subchapter T)	☐ Groundwater Alternate Source Demonstration
☐ Major Amendment	☐ Groundwater Corrective Action
☐ Minor Amendment	☐ Groundwater Monitoring Report
☐ Limited Scope Major Amendment	☐ Groundwater Background Evaluation
☐ Notice Modification	☐ Landfill Gas Corrective Action
☐ Non-Notice Modification	☐ Landfill Gas Monitoring
☐ Transfer/Name Change Modification	☐ Liner Evaluation Report
☐ Temporary Authorization	☐ Soil Boring Plan
☐ Voluntary Revocation	☐ Special Waste Request
☐ Subchapter T Disturbance Non-Enclosed Structure	☐ Other:
☐ Other:	

Table 2 - Industrial & Hazardous Waste Correspondence

Applications	Reports and Responses
☐ New	☐ Annual/Biennial Site Activity Report
☐ Renewal	☐ CPT Plan/Result
☐ Post-Closure Order	☐ Closure Certification/Report
☐ Major Amendment	☐ Construction Certification/Report
☐ Minor Amendment	☐ CPT Plan/Result
☐ CCR Registration	☐ Extension Request
☐ CCR Registration Major Amendment	☐ Groundwater Monitoring Report
☐ CCR Registration Minor Amendment	☐ Interim Status Change
☐ Class 3 Modification	☐ Interim Status Closure Plan
☐ Class 2 Modification	☐ Soil Core Monitoring Report
☐ Class 1 ED Modification	☐ Treatability Study
☐ Class 1 Modification	☐ Trial Burn Plan/Result
☐ Endorsement	☐ Unsaturated Zone Monitoring Report
☐ Temporary Authorization	☐ Waste Minimization Report
☐ Voluntary Revocation	☐ Other:
☐ 335.6 Notification	
☒ Other: Response to Comments	

PASADENA REFINING SYSTEM, INC.

111 Red Bluff Road
Pasadena, Texas 77506
Office: 713-472-2461

August 7, 2025

Ms. Kelly Keel
Executive Director
Texas Commission on Environmental Quality
Attention: Industrial and Hazardous Waste Permits Section, MC 130
Waste Permits Division
P.O. Box 13087
Austin, Texas 78711-3087

ELECTRONIC SUBMITTAL

RE: Technical NOD 2 - Compliance Plan
Application for Hazardous Waste Permit and Compliance Plan Renewal
Pasadena Refining System, Inc. (PRSI)
111 Red Bluff Road, Pasadena, Harris County
TCEQ Hazardous Waste Permit / Compliance Plan No. 50112
TCEQ SWR No. 30311; CN603137605; RN100716661; EPA ID No. TXD008091290

Dear Ms. Keel:

Please accept the attached Response to Comments prepared by AECOM on behalf of Pasadena Refining System, Inc. for comments received on July 25, 2025 for the Hazardous Waste Permit and Compliance Plan renewal.

If you have any questions regarding this application, you may contact me via email at jebert@chevron.com or 713-472-4051.

Sincerely,

Joseph Ebert
HSE Manager
Pasadena Refinery

cc: File

AECOM
248 Chapman Road
Suite 101
Newark, DE 19702
USA
aecom.com

August 7, 2025

Ms. Kelly Keel
Interim Executive Director
Texas Commission on Environmental Quality
Attention: Industrial and Hazardous Waste Permits Section, MC 130
Waste Permits Division
P.O. Box 13087
Austin, Texas 78711-3087

RE: Response to Comments – Compliance Plan Technical NOD 2
Pasadena Refining System, Inc. – Pasadena, Harris County
Hazardous Waste Permit No. 50112
Industrial Solid Waste Registration No. 30311
EPA Identification No. TXD008091290
RN100716661/ CN603137605

Dear Ms. Keel:

On July 25, 2025, Pasadena Refining System, Inc. (PRSI) received Agency's Compliance Plan Technical Notice of Deficiency (NOD) 2 comments for the Hazardous Waste Permit Number 50112 renewal application for the Pasadena Refinery, located in Pasadena, Texas. Below are the Agency comments followed by the PRSI responses.

***Comment CP2(2)**, CP Attachment A, Sheet 3 of 10: Please revise CP Attachment A, Sheet 3 of 10, so that the Bauxite Pond is listed as Permit Unit No. 3, rather than as Permit Unit No. 4.*

> **Response:** The revised CP Attachment A, Sheet 3 of 10 is included in Attachment A.

***Comment CP5(2)**, CP Table II: Please clarify how the Refinery Maintenance Area Ditch (SWMU 7) and the Detol Pad (SWMU 8) are "being monitored under the Compliance Plan" when the only affected media noted for these SWMUs is soil and PRSI states that the remedial actions for these SWMUs have been completed. Please revise CP Table II as necessary and provide the approval letter if no further action was granted.*

> **Response:** Remedial action for solid waste management units (SWMUs) 7 and 8 addressed impacted soils at both SWMUs. No impact to groundwater has been documented from SWMUs 7 and 8; however, as noted in the *Corrective Measures Implementation Plan – Nine Solid Waste Management Units* dated June 2010, PRSI opted to monitor for some constituents of concern from these SWMUs based on discussions with TCEQ. PRSI continues to monitor Corrective Action Observation wells for these units in accordance with the *2012 Site-Wide Groundwater Response Action Plan* (RAP).
>
> Property deed notices indicate that SWMUs 1 through 9 were closed under Risk Reduction Rule Standard 3. TCEQ released SWMUs 1 through 9 from post-closure care for soils in a letter dated July 26, 2013. SWMUs 7 and 8 along with SWMU 1 (Tank Fire Walls - 33 Tanks) and SWMU 6 - Dehydrator Tank Fire Walls had not previously been identified as NFA in the Hazardous Waste Permit or in permit applications. In addition, SWMUs 2 through 5 and SWMU 9 showed September 7,

2006 as their NFA date. PRSI has revised CP Table II and Table XI.A.1 to reflect the information in the property deed notices and the July 2013 letter for SWMUs 1 through 9. Copies of the letter and the deed notices are provided in Attachment B. Redline and clean copy versions of the revised tables are included in Attachment C.

***Comment CP11(2)**, CP Table III: Please clarify how the ^{SW}GW protective concentration level (PCL) was derived for 1,2-dichloroethane for the Ponds WMA.*

Response: Thank you for your comment. PRSI has reviewed the screening level for this compound and updated CP Table III with the approved limit from the RAP. Redline and clean copy versions of the revision are provided in Attachment C. This constituent has been assigned a conservative inhalation of volatiles from groundwater ($^{Air}GW_{Inh-V}$) PCL pending approval of site-specific surface water-groundwater (^{SW}GW) PCLs, at which time PRSI plans to request a permit modification to revise the Compliance Plan.

***Comment CP16(2)**, CP Table VI: Please recalculate the compliance period listed for the three RCRA- regulated units. The compliance period is defined as the "active life of the unit," which is the length of time from when waste was first placed in the RCRA regulated unit until the unit was closed. PRSI may note on CP Table VI if the initial compliance period has been achieved, but groundwater monitoring is still ongoing.*

Response: PRSI re-calculated the compliance period using the active life of each unit. The revised CP Table VI is provided in Attachment C in redline and clean copy format.

***Comment CP17(2)**, Table I.1, XI.C.1.a.(1), XI.D.3.a.(6), CP Table VII, and CP Table VIII:*

a) The TCEQ approves PRSI's request to reduce the Compliance Plan's groundwater monitoring reporting frequency. The TCEQ approves PRSI's request to submit an annual report by January 21st of each year to document the groundwater monitoring results for the site's Compliance Monitoring and Corrective Action Monitoring Programs. The TCEQ acknowledges that CP Table VII already lists the reporting requirement as "Annual by January 21," so no revisions are required to the Table to address the TCEQ's approval;

b) The TCEQ approves PRSI's request to reduce the groundwater sampling frequency for the Moat RCRA regulated unit, which is subject to the Compliance Monitoring Program. Please revise CP Table VIII, Item D to show that the Moat will now be sampled annually; and

c) Please revise Table I.1 to add the requests above to the permit renewal application. Also, delete from Table I.1 PRSI's request to extend the allowed sampling timeframe (i.e., from 30 days to 60 days of each first and third quarter) since the TCEQ did not approve this proposed change.

Response:

a) Thank you for your comment.

b) PRSI has revised CP Table VIII Item D to show annual sampling for the Moat. Additionally, the unlocked version of CP Table VIII provided by TCEQ to enable this change allowed for several other clarifications to the original submittal as follows:

- Provided date that the Sampling and Analysis Plan was submitted (Item B).
- Noted that the Facility Operations Area requirement (Item G) is not applicable.

- Provided dates that institutional controls were completed for the Plume Management Zones (Item H).

The revised CP Table VIII is provided in Attachment C in redline and clean copy format.

c) PRSI has revised Table I.1 as requested. The revised Table is provided in Attachment C in redline and clean copy format.

***Comment CP20(2)**, Table XI.E: Revise the compliance period listed for the Moat so that it is based on the "active life" of the RCRA regulated unit and matches the information in CP Table VI (i.e., should be 12 years).*

Response: PRSI revised the compliance period for the Moat. The revised Table XI.E is provided in Attachment C in redline and clean copy format.

***Comment CP25(2)**, Table XI.E.2.e [West Property Groundwater PMZ]: Revise the table to:*

a) List the 5 alternate point of exposure wells as point of exposure wells (rather than as point of compliance wells);

b) Verify the information in Item 1.G "Field Quality Control Sampling" and revise if necessary. The number of proposed samples appears high and only accounts for one sampling event per year; and

c) Ensure Item 1.H "Sampling Analysis Cost," and the overall "Annual Groundwater Monitoring Cost" in Item 2 are correct after all revisions are made.

Response: PRSI has updated Table XI.E.2.e as requested. The correct number of field quality control samples is 3 samples twice per year. The revised Table XI.E [West Property Groundwater PMZ] is provided in Attachment C in redline and clean copy format.

***Comment CP26(2)**, Table XI.E.3: Please revise Table XI.E.3. for the West Property Groundwater PMZ and the overall Table XI.E.3 for all PRSI release areas based on the revisions requested in CP25(2) above.*

Response: The revised Table XI.E.3 incorporating changes to the cost estimate for the West Property Groundwater PMZ is provided in Attachment C in redline and clean copy format.

Please contact me at [redacted] or 302.781.6060 if you have any questions.

Sincerely**,**

AECOM

Maureen McBride

Maureen McBride
Environmental Compliance
AECOM
T: 1 (302) 781-6060
E: [redacted]

Revised Pages in Response to Texas Commission on Environmental Quality Compliance Plan NOD 2

Application for Permit Renewal
Pasadena Refinery System, Inc.
Pasadena, Harris County, Texas

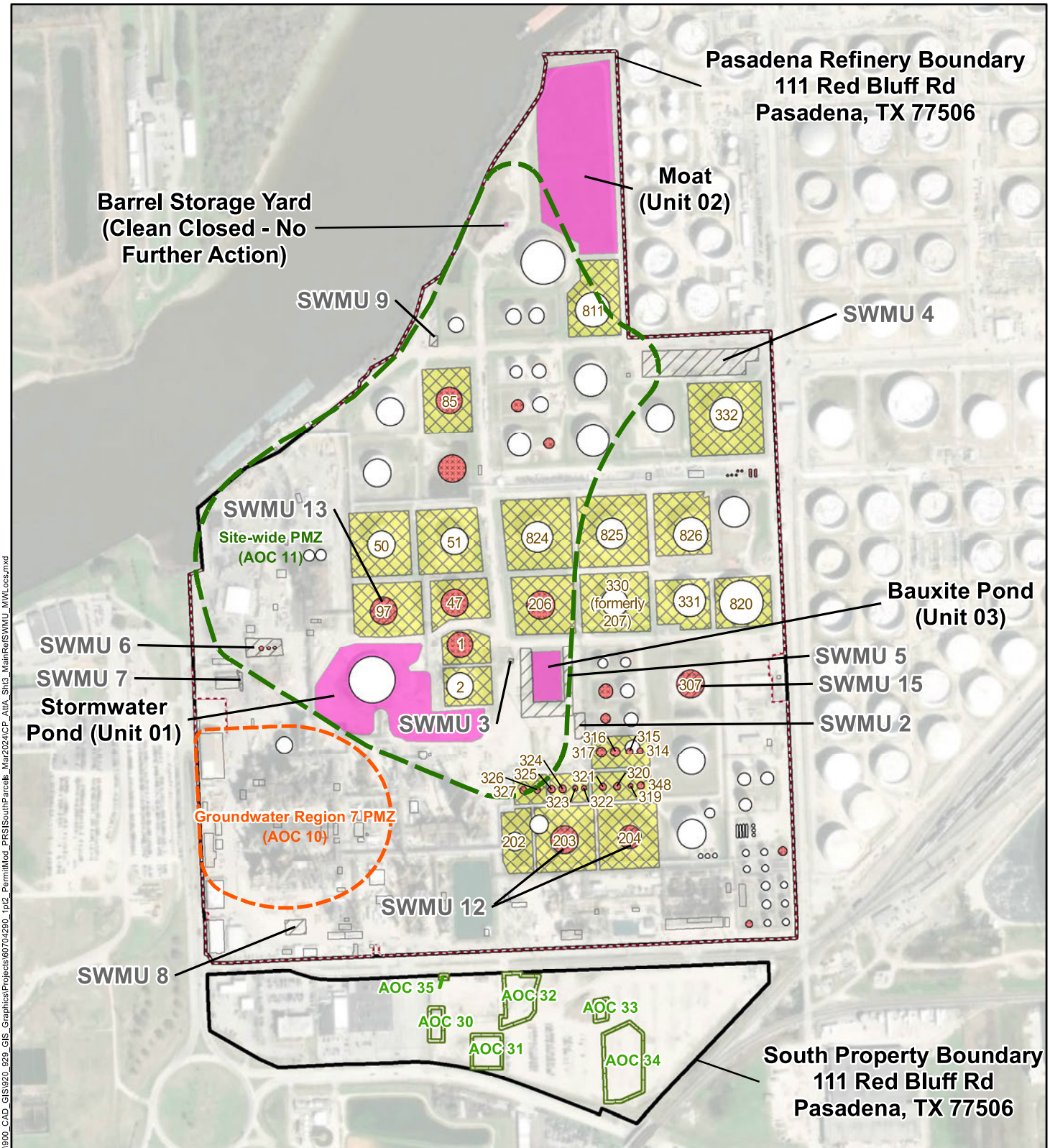
EPA ID # 008091290
Solid Waste Registration No. 30311
Hazardous Waste Permit and Compliance Plan No. 50112
Tracking No. 30191241

Prepared for:
Chevron

Prepared by:
AECOM
248 Chapman Road
Suite 101
Newark, DE 19702

Project No.: 60726317
Date: August 2025

Attachment A
Revised Figure



Legend

- SWMU 1
- SWMU (Other - as noted)
- Areas of Concern
- Inactive Hazardous Waste Management Unit
- Site Boundary Line
- Site Structure
- Site-Wide Plume Management Zone
- Region 7 Plume Management Zone
- Existing Tank
- Former Tank
- Fence

Notes:
2022 Vivid Advanced Imagery Source: Maxar

0 300 600
Feet
1 inch = 600 feet

MAP FORMATTED FOR "A" (8.5" X 11") SIZE SHEET. TEXT SCALE NOT VALID FOR DIFFERENT PAGE SIZE.

AECOM
248 Chapman Road
Suite 101
Newark, DE 19702

PRSI RCRA Permit
Pasadena, Texas

CP Attachment A, Sheet 3 of 10 - Main Refinery and South Property WMU, SWMU, and AOC Locations

TASK NUMBER:	PROJECT NUMBER:
1.2	60753428
DESIGNED BY: M. MCBRIDE	DATE: 5/13/2025
DRAWN BY: K. LYNCH	FIGURE NUMBER: Attachment A Sheet 3
DATA QUALITY CHECK BY: M. MCBRIDE	

Z:\Houston-USHOU2\DCS\Projects\ENV\60664254_ChvPRSI\900_CAD_GIS\920_929_GIS_Graphics\Projects\60704290_tpl2_PermitMod_PRSI\SouthParcels_Mar2024\CP_AttA_Sht3_MainRefSWMU_MWLocs.mxd

Attachment B
Supporting Documents

Bryan W. Shaw, Ph.D., *Chairman*
Carlos Rubinstein, *Commissioner*
Toby Baker, *Commissioner*
Zak Covar, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 26, 2013

Mr. John Jones
Senior Environmental Engineer
Pasadena Refining System, Inc.
111 Red Bluff Road
Pasadena, Texas 77506

Re: Approval of Filing of Institutional Controls
Proof of Deed Recordation – RCRA Corrective action SWMU's, dated July 2, 2013
Pasadena Refining System, Inc. (PRSI)/Pasadena Facility,
111 Red Bluff Road, Pasadena, Harris County, Texas;
TCEQ SWR No. 30311, CN603137605, RN100716661
EPA ID No. TXD008091290
Compliance Plan No. CP-50112;

Dear Mr. Jones:

The Texas Commission on Environmental Quality (TCEQ) received your letter dated July 2, 2013 containing proof of deed recordation for 14 areas of the PRSI site involving 9 Solid Waste Management Units (SWMUs). The SWMUs affected are described as follows.

AREAS / SWMUs

1. DETOL PAD (SWMU 8)
2. Maintenance Area Ditch (SWMU 7) and Dehydrator Tank Firewall (SWMU 6)
3. Bauxite Pond (SWMU 5)
4. Trap #2 Sump (SWMU 3)
5. Buried Cell (SWMU 2)
6. Firewall Tanks 202 – 204, 314 – 317, and 319 – 327 (SWMU 1)
7. Gate 14 Waste Pile (SWMU 4)
8. Tank 332 Firewall (SWMU 1)
9. Tank 811 Firewall (SWMU 1)
10. Firewall for Tanks 824, 825, 826,206, 330, 331, and 820 (SWMU 1)
11. Firewall for Tanks 1, 210, 97, 47, 50, and 51 (SWMU 1)
12. Sandblast Grit Pile (No SWMU #)
13. Firewall for Tank 85 (SWMU 1)
14. Dehydration Tank Firewall (SWMU 6)

The certification states that contaminants remaining at the site have been remediated to meet non-residential or commercial/industrial criteria under Risk Reduction Standard (RRS) No. 3 pursuant to Title 30 Texas Administrative Code (TAC) Chapter 335 Subchapters A and S.

After reviewing the proof of deed recordation, it appears that the requirements of 30 TAC §335.566 have been completed. The TCEQ hereby releases the facility from post-closure care responsibilities for the above referenced unit(s) or area.

In order to attain RRS No. 3, all industrial solid waste and municipal hazardous waste and waste residues must be removed or decontaminated to levels that will not pose a substantial present or future threat to human health and the environment, and must further demonstrate that any residue remaining in place will not pose a threat of any future release that would increase the concentrations of contaminants in the environmental media above the cleanup levels determined for that particular risk reduction standard as specified in 30 TAC §335.553(c).

Please be aware that it is the continuing obligation of persons associated with a site to ensure that municipal hazardous waste and industrial solid waste are managed in a manner which does not cause the discharge or imminent threat of discharge of waste into or adjacent to waters in the state, a nuisance, or the endangerment of the public health and welfare as required by 30 TAC §335.4. If the response actions described in the report fail to comply with these requirements, please take any necessary and authorized action to correct such conditions. A TCEQ field inspector may conduct an inspection of your site to determine compliance with the report.

Questions concerning this letter should be directed to me at (512) 239-2238. When responding by mail, please submit an original and one copy of all correspondence and reports to the TCEQ Remediation Division at Mail Code MC-127. An additional copy should be submitted to the local TCEQ Region Office. Please note that the Remediation Division sends letters via email when appropriate. Therefore, current email addresses and the site identification information in the reference block should be included in all future submittals.

Sincerely,

Charles Brigance, Project Manager
Team 1, VCP-CA Section
Remediation Division
Texas Commission on Environmental Quality

CEB/jdm

cc: Mr. Jason Ybarra, Waste Section Manager, TCEQ Region 12 Office, Houston

PASADENA REFINING SYSTEM INC.

111 Red Bluff Road
Pasadena, Texas 77506
Office: 713-472-2461

July 2, 2013

Mr. Charles Brigance, Project Manager
Texas Commission on Environmental Quality
Corrective Action Team 1, VCP-CA Section, Mail Code MC-127
P.O. Box 13087
Austin, Texas 78711-3087

Subject: **Proof of Deed Recordation – RCRA Corrective Action SWMU's**
Pasadena Refining Inc., Pasadena, Texas
Compliance Plan No. CP-50112, SWR No. 30311
RN 100716661, CN 603137605

Dear Mr. Brigance:

Enclosed please find a copy of proof of deed recordation of fourteen (14) areas within nine (9) solid waste management units (SWMU's) included in the Corrective Measures Implementation Report for Soils at Pasadena Refining.

A description of the areas in question including a certification of remediation, a list of known constituents and concentrations in soils and a sketch and metes & bounds report were filed in the real property records in Harris County, Texas on June 25, 2013.

PRSI would like to request that TCEQ accept this proof of recordation and the previously submitted closure certification for the SWMU's in question and release PRSI from Financial Assurance requirements for Corrective Action related to soils under Compliance Plan CP-50112.

If you have any comments or questions, please contact me at 713-920-4708 or email at jjones@pasadenaRefining.com

Sincerely,

John Jones
Senior Environmental Engineer

cc: Ms. Nicole Bealle, TCEQ Region12
Harris County

8

Notice

m

20130314015
06/25/2013 RP2 $44.00

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Harris County, Texas in compliance with the recordation requirements of said rules:

I

Pasadena Refining System, Inc. (PRSI) has performed a remediation of the land described herein (Firewalls of Tanks 202, 203, 204, 322-327, 319-321, 348, and 314-317, part of SWMU 1). A list of the known constituents, including known concentrations, is attached hereto and is made part of this filing (Exhibit A). Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 30311 files, which are available for inspection upon request at the central office of the Texas Commission on Environmental Quality in Austin.

The Texas Commission on Environmental Quality derives its authority to review the remediation of this tract of land from 361.002 of the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361, which enables the Texas Commission on Environmental Quality to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to 5.012 and 5.013 of the Texas Water Code, Texas Water Code Ann. Chapter 5, the Texas Commission on Environmental Quality is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the Texas Commission on Environmental Quality requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the Texas Commission on Environmental Quality of the suitability of this land for any purpose, nor does it constitute any guarantee by the Texas Commission on Environmental Quality that the remediation standards specified in this certification have been met by PRSI.

II

Being a 7.435-acre (323,859 square feet) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas, said 7.435-acre tract being a portion of a 167.33-acre tract of land conveyed to Pasadena Refining System, Inc., as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County Texas and being more particularly described by metes and bounds as provided in Exhibit B. Exhibit B also provides a sketch of said 7.435-acre tract.

Return to: W John Jones
PRSI
111 Red Bluff Rd.
Pasadena, TX 77506

T20130314015 06/25/2013 RP2 $44.00

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION
(Continued)

Contaminants and waste deposited hereon have been remediated to meet industrial/commercial soil criteria, in accordance with a plan designed to meet the Texas Commission on Environmental Quality 's requirements in 30 Texas Administrative Code §335.555 (Risk Reduction Standard No. 3), which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential. The current or future owner must undertake actions as necessary to protect human health or the environment in accordance with the rules of the Texas Commission on Environmental Quality.

III

The owner of the site is Pasadena Refining System, Inc. and its address is 111 Red Bluff Road, Pasadena, Texas 77506, where more specific information may be obtained from the plant manager.

EXECUTED this the 24th day of June, 2013

Pasadena Refining System, Inc.

John Edmunds
Operations Director and COO

STATE OF TEXAS
HARRIS COUNTY

BEFORE ME, on this the 24 day of June, personally appeared Mr. John Edmunds, Operations Director and COO, of Pasadena Refining System, Inc., known to me to be the person and agent of said corporation whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 24 day of June, 2013.

Iriva Lyn Sturdivant
Notary Public in and for the State of Texas
County of Harris County

NOTARY PUBLIC STATE OF TEXAS
IRIVA LYN STURDIVANT
My Commission Expires
February 9, 2014

My Commission Expires
2.9.2014

20130-50-2209

Exhibit A: Table of Soil Concentrations

2020-09-150 ES

Priority Group 7
(includes Firewalls for Tanks 202, 203, 204, 322-327, 319-321, 348, and 314-317)
Known Constituents and Concentrations in Soils
Pasadena Refining Systems, Inc.

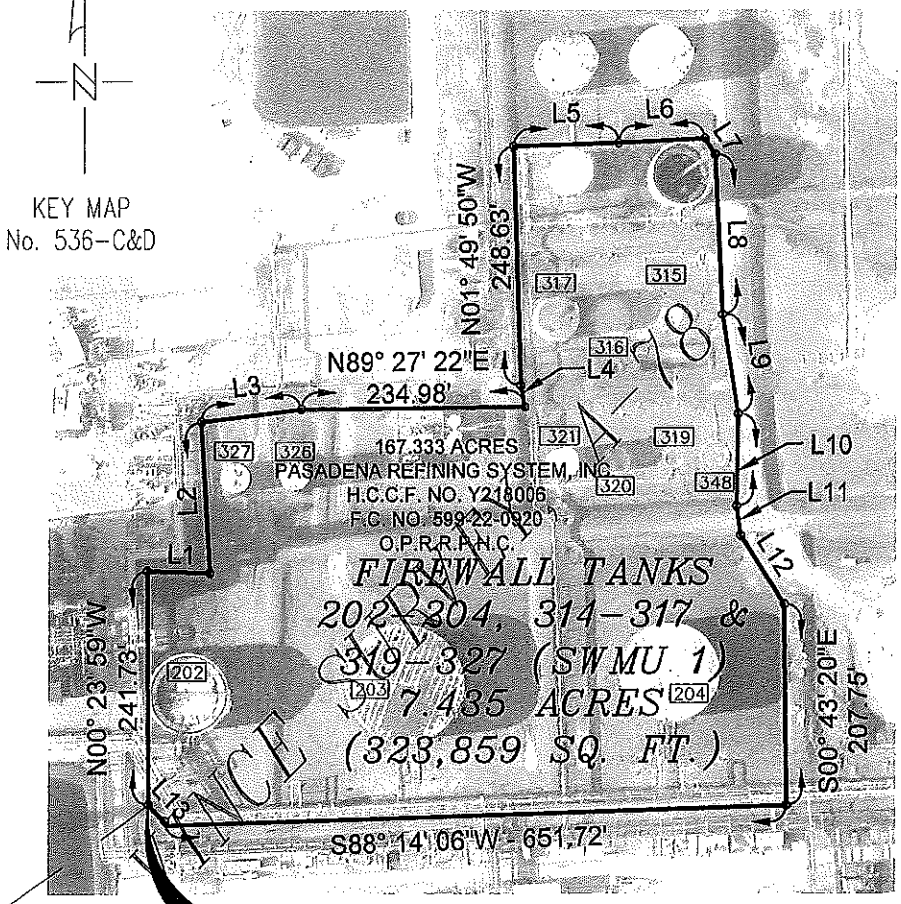
Constituent	Maximum Concentration (mg/Kg)
Total Phenols	42
Barium	550
Cadmium	1.5
Chromium	220
Lead	130
Nickel	58
Zinc	200
Benzene	0.46
Ethylbenzene	1.9
Toluene	110
m,p-Xylenes	98
o-Xylenes	51
Benzo(a)anthracene	11
Naphthalene	51

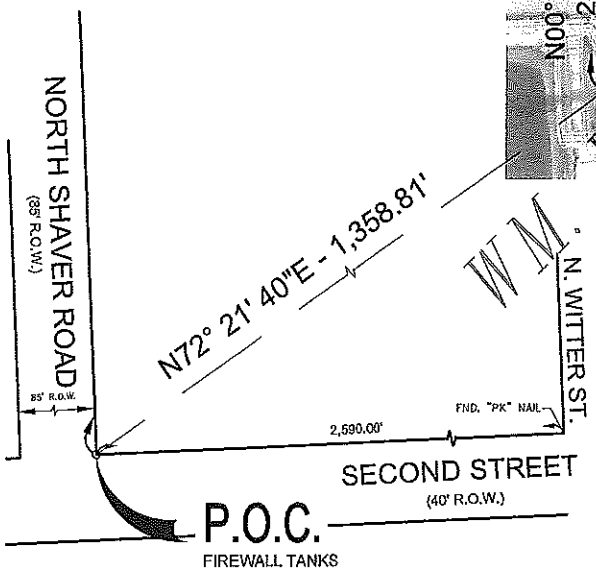
These values are based on sampling efforts conducted in the RCRA Facility Investigation (RFI) program for soils beneath the Solid Waste Management Units, some of which may have been removed or treated or covered with clean backfill material for corrective action in accordance with TCEQ authorization.

HOU09-1505-1505 84

Exhibit B: Sketch and Area Metes & Bounds

Line Table		
Line #	Length	Direction
L1	65.43'	S88° 00' 02"E
L2	157.72'	N03° 16' 58"W
L3	105.95'	N82° 53' 14"E
L4	22.42'	N10° 20' 04"W
L5	111.64'	N88° 18' 28"E
L6	90.94'	N87° 16' 25"E
L7	19.41'	S33° 17' 00"E
L8	166.79'	S02° 39' 28"E
L9	104.34'	S09° 26' 50"E
L10	96.61'	S00° 48' 00"W
L11	30.95'	S07° 43' 15"E
L12	84.63'	S32° 59' 08"E
L13	29.86'	N44° 16' 32"W





P.O.B.
FIREWALL TANKS
202-204, 314-317 &
319-327 (SWMU 1)
N = 13,829,160.53
E = 3,172,024.38

P.O.C.
FIREWALL TANKS
202-204, 314-317 &
319-327 (SWMU 1)
FND. "PK" NAIL
N = 13,828,768.84
E = 3,170,729.60

WEISSER
Engineering Co.
19500 Park Row, Suite 100
Houston, Texas 77084
(281) 579 - 7300
T.B.P.E.R. #F-68

STATE OF TEXAS
REGISTERED
WALTER P. SASS
4410
PROFESSIONAL
LAND SURVEYOR

BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE TEXAS SOUTH CENTRAL ZONE No. 4204 STATE PLANE GRID COORDINATES (NAD83)

NOTE:
THIS SURVEY IS BEING CREATED SOLELY FOR THE PARTIES HEREIN STATED; NO LICENSE HAS BEEN CREATED, EXPRESS OR IMPLIED, TO COPY THE SURVEY EXCEPT AS IS NECESSARY IN CONJUNCTION WITH THIS TRANSACTION.

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT. ALL ENCUMBRANCES MAY NOT BE SHOWN.

REVISION DATE: 04/11/2013

PRIORITY GROUP 7

SKETCH OF A 7.435-ACRE (323,859 SQ. FT.) TRACT SITUATED IN THE WM. VINCE SURVEY, A-78, HARRIS COUNTY, TEXAS

© Copyright 2013 Weisser Engineering Company, Inc.

DRAWN BY:	L.W.	CALC'D. BY:	J.H.	SCALE:	1" = 200'
F.B. NO:	2841	CHECKED BY:	M.B.	SHEET	01 OF 01
CREW CHIEF:	B.H.	DATE:	5/21/2013	JOB No.:	CT220 (1908-020)

P:\CT220\dwg\CT220_7.435_Acre_Tract.dwg, Layout 1, 05/23/13 9:52:21AM, jmicholik

FIREWALL FOR TANKS 202-204, 314-317, 319-327 (SWMU 1)

DESCRIPTION OF A 7.435-ACRE (323,859 SQ. FT.)
TRACT OF LAND SITUATED IN
THE WM. VINCE SURVEY, A-78,
HARRIS COUNTY, TEXAS

Being a 7.435-acre (323,859 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas. Said 7.435-acre tract being a portion of a 167.333-acre tract of land conveyed to Pasadena Refining System, Inc. as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County, Texas, and being more particularly described by metes and bounds as follows with the bearings shown hereon based on Texas South Central Zone No. 4204 state plane grid coordinates (NAD 83);

COMMENCING at a "PK" nail found for the intersection of the east right-of-way line of North Shaver Road (85 foot wide right-of-way), and the north right-of-way line of Second Street (40 foot wide right-of-way) and for the southwest corner of said 167.333-acre tract, (with a grid coordinate of N = 13,828,768.84, E = 3,170,729.60);

THENCE North 72° 21' 40" East, over and across said 167.333-acre tract, a distance of 1,358.81 feet to the most northerly southwest corner and the **POINT OF BEGINNING** of said tract herein described, (with a grid coordinate of N = 13,829,180.53, E = 3,172,024.38);

THENCE North 00° 23' 59" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 241.73 feet to a point for a northwest corner of said tract herein described;

THENCE South 88° 00' 02" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 65.43 feet to a point for an interior corner of said tract herein described;

THENCE North 03° 16' 58" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 157.72 feet to a point for a northwest corner of said tract herein described;

THENCE North 82° 53' 14" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 105.95 feet to a point for an angle point of said tract herein described;

THENCE North 89° 27' 22" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 234.98 feet to a point for an interior corner of said tract herein described;

THENCE North 10° 20' 04" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 22.42 feet to a point for an angle point of said tract herein described;

THENCE North 01° 49' 50" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 248.63 feet to a point for the most northerly northwest corner of said tract herein described;

THENCE North 88° 18' 28" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 111.64 feet to a point for an angle point of said tract herein described;

THENCE North 87° 16' 25" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 90.94 feet to a point for the northeast corner of said tract herein described;

THENCE South 33° 17' 00" East, over and across said 167.333-acre tract and with a northeast line of said tract herein described, a distance of 19.41 feet to a point for a northeast corner of said tract herein described;

THENCE South 02° 39' 28" East, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 166.79 feet to a point for an angle point of said tract herein described;

THENCE South 09° 26' 50" East, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 104.34 feet to a point for an angle point of said tract herein described;

THENCE South 00° 48' 00" West, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 96.61 feet to a point for an angle point of said tract herein described;

THENCE South 07° 43' 15" East, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 30.95 feet to a point for an angle point of said tract herein described;

THENCE South 32° 59' 08" East, over and across said 167.333-acre tract and with a northeast line of said tract herein described, a distance of 84.63 feet to a point for an angle point of said tract herein described;

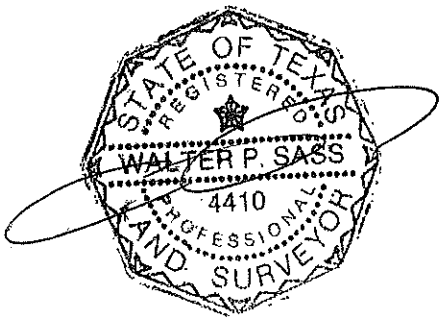
THENCE South 00° 43' 20" East, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 207.75 feet to a point for the southeast corner of said tract herein described;

THENCE South 88° 14' 06" West, over and across said 167.333-acre tract and with the south line of said tract herein described, a distance of 651.72 feet to a point for a southwest corner of said tract herein described;

THENCE North 44° 16' 32" West, over and across said 167.333-acre tract and with a southwest line said tract herein described, a distance of 29.86 feet to the **POINT OF BEGINNING** and containing 7.435 acres (323,859 square feet) of land.

Compiled by:

Weisser Engineering Company
19500 Park Row, Suite 100
Houston, Texas 77084
Job No.: CT220 (1908-020)
Date: 5/21/13



FILED

2013 JUN 25 PM 1:22

Stan Stanart
COUNTY CLERK
HARRIS COUNTY, TEXAS

20130354855

ANY PROVISION HEREIN WHICH RESTRICTS THE SALE, RENTAL, OR USE OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW.

THE STATE OF TEXAS
COUNTY OF HARRIS

I hereby certify that this instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me; and was duly RECORDED, in the Official Public Records of Real Property of Harris County, Texas

JUN 25 2013

Stan Stanart
COUNTY CLERK
HARRIS COUNTY, TEXAS

8

Notice

M

20130314020
06/25/2013 RP2 $44.00

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Harris County, Texas in compliance with the recordation requirements of said rules:

I

Pasadena Refining System, Inc. (PRSI) has performed a remediation of the land described herein (Tank 332 Firewall, part of SWMU 1). A list of the known constituents, including known concentrations, is attached hereto and is made part of this filing (Exhibit A). Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 30311 files, which are available for inspection upon request at the central office of the Texas Commission on Environmental Quality in Austin.

The Texas Commission on Environmental Quality derives its authority to review the remediation of this tract of land from 361.002 of the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361, which enables the Texas Commission on Environmental Quality to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to 5.012 and 5.013 of the Texas Water Code, Texas Water Code Ann. Chapter 5, the Texas Commission on Environmental Quality is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the Texas Commission on Environmental Quality requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the Texas Commission on Environmental Quality of the suitability of this land for any purpose, nor does it constitute any guarantee by the Texas Commission on Environmental Quality that the remediation standards specified in this certification have been met by PRSI.

II

Being a 2.035-acre (88,641 square feet) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas, said 2.035-acre tract being a portion of a 167.33-acre tract of land conveyed to Pasadena Refining System, Inc., as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County Texas and being more particularly described by metes and bounds as provided in Exhibit B. Exhibit B also provides a sketch of said 2.035-acre tract.

Return to: John Jones
PRSI
111 Red Bluff Rd.
Pasadena, TX 77506

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION
(continued)

Contaminants and waste deposited hereon have been remediated to meet industrial/commercial soil criteria, in accordance with a plan designed to meet the Texas Commission on Environmental Quality 's requirements in 30 Texas Administrative Code §335.555 (Risk Reduction Standard No. 3), which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential. The current or future owner must undertake actions as necessary to protect human health or the environment in accordance with the rules of the Texas Commission on Environmental Quality.

III

The owner of the site is Pasadena Refining System, Inc. and its address is 111 Red Bluff Road, Pasadena, Texas 77506, where more specific information may be obtained from the plant manager.

EXECUTED this the 24th day of June, 2013

Pasadena Refining System, Inc.

John Edmunds
Operations Director and COO

LDL

STATE OF TEXAS
HARRIS COUNTY

BEFORE ME, on this the 24 day of June, personally appeared Mr. John Edmunds, Operations Director and COO of Pasadena Refining System, Inc. , known to me to be the person and agent of said corporation whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 24 day of June, 2013.

Iriva Lyn Sturdivant
Notary Public in and for the State of Texas
County of Harris County

IRIVA LYN STURDIVANT
My Commission Expires
February 9, 2014

My Commission Expires
2.9.2014

T205-150-1205 GM

Exhibit A: Table of Soil Concentrations

525-305-5525

Priority Group 6
(which includes Gate 14 Waste Pile and Tank 332 Firewall)
Known Constituents and Concentrations in Soils
Pasadena Refining Systems, Inc.

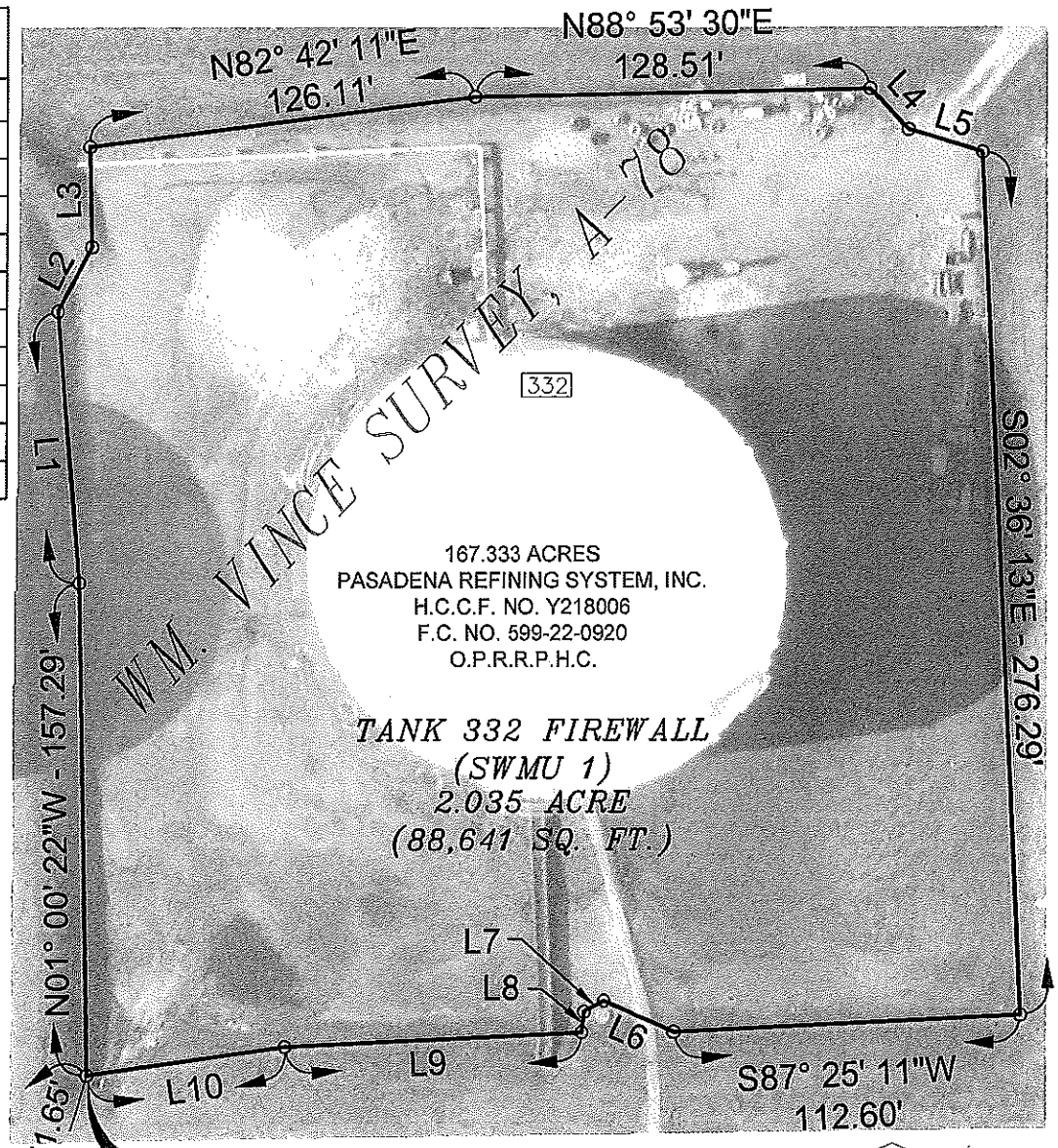
Constituent	Maximum Concentration (mg/Kg)
Total Phenols	800
Arsenic	11.8
Barium	796
Cadmium	0.7
Chromium	367
Cobalt	248
Lead	4000
Mercury	0.14
Nickel	68.1
Zinc	190
Benzene	2.7
Ethylbenzene	5.32
Toluene	61
m,p-Xylenes	91
o-Xylenes	35
Benzo(a)anthracene	36
Naphthalene	140

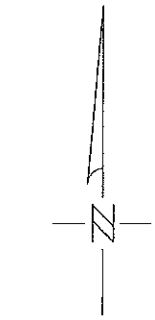
These values are based on sampling efforts conducted in the RCRA Facility Investigation (RFI) program for soils beneath the Solid Waste Management Units, some of which may have been removed or treated or covered with clean backfill material for corrective action in accordance with TCEQ authorization.

Exhibit B: Sketch and Area Metes & Bounds

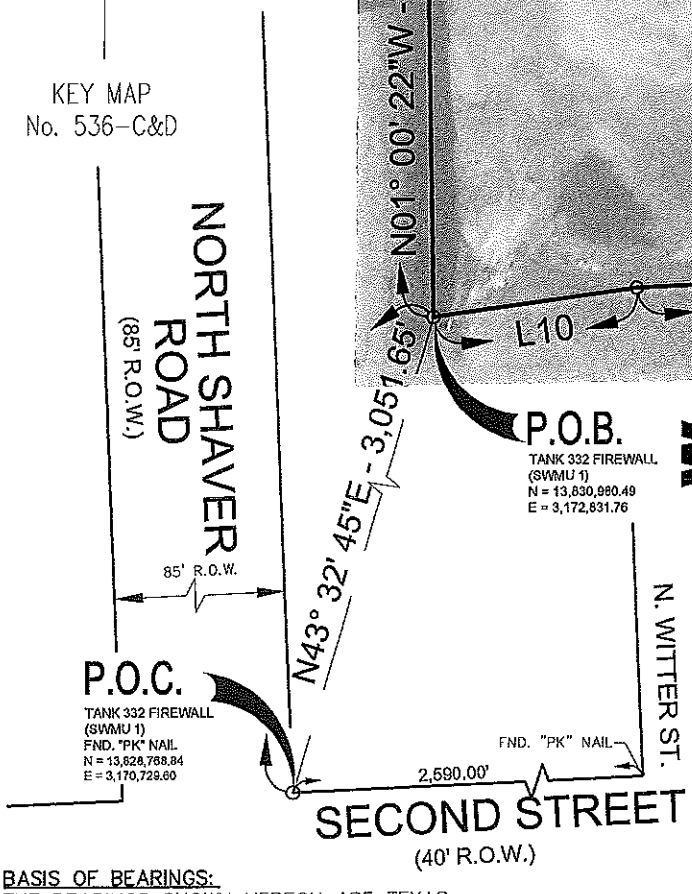
2008-09-2008 SE

Line Table		
Line #	Length	Direction
L1	86.73'	N04° 45' 50"W
L2	23.34'	N28° 16' 06"E
L3	32.18'	N01° 16' 04"W
L4	18.11'	S43° 31' 15"E
L5	25.31'	S73° 14' 40"E
L6	24.85'	N66° 18' 48"W
L7	7.18'	S60° 43' 42"W
L8	6.59'	S06° 32' 41"W
L9	96.97'	S87° 22' 18"W
L10	64.70'	S82° 05' 27"W





KEY MAP
No. 536-C&D



WEISSER Engineering Co.
19500 Park Row, Suite 100
Houston, Texas 77084
(281) 579 - 7300
T.B.P.E.R. #F-68

STATE OF TEXAS
REGISTERED
WALTER P. SASS
4410
PROFESSIONAL
LAND SURVEYOR

BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE TEXAS SOUTH CENTRAL ZONE No. 4204 STATE PLANE GRID COORDINATES (NAD83)

NOTE:
THIS SURVEY IS BEING CREATED SOLELY FOR THE PARTIES HEREIN STATED; NO LICENSE HAS BEEN CREATED, EXPRESS OR IMPLIED, TO COPY THE SURVEY EXCEPT AS IS NECESSARY IN CONJUNCTION WITH THIS TRANSACTION.

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT. ALL ENCUMBRANCES MAY NOT BE SHOWN.

REVISION DATE: 04/04/2013

PRIORITY GROUP 6

SKETCH OF A 2.035-ACRE (88,641 SQ. FT.) TRACT SITUATED IN THE WM. VINCE SURVEY, A-78, HARRIS COUNTY, TEXAS

© Copyright 2013 Weisser Engineering Company, Inc.

DRAWN BY:	L.W.	CALC'D. BY:	J.H.	SCALE:	1" = 60'
F.B. NO:	2841	CHECKED BY:	M.B.	SHEET	01 OF 01
CREW CHIEF:	B.H.	DATE:	05/21/2013	JOB No.:	CT220 (1908-020)

2,590-59-2,590

TANK 332 FIREWALL (SWMU 1)

**DESCRIPTION OF A 2.035-ACRE (88,641 SQ. FT.)
TRACT OF LAND SITUATED IN
THE WM. VINCE SURVEY, A-78,
HARRIS COUNTY, TEXAS**

Being a 2.035-acre (88,641 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas. Said 2.035-acre tract being a portion of a 167.333-acre tract of land conveyed to Pasadena Refining System, Inc. as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County, Texas, and being more particularly described by metes and bounds as follows with the bearings shown hereon based on the Texas South Central Zone No. 4204 state plane grid coordinates (NAD 83);

COMMENCING at a "PK" nail found for the intersection of the east right-of-way line of North Shaver Road (85 foot wide right-of-way), and the north right-of-way line of Second Street (4085 foot wide right-of-way) and for the southwest corner of said 167.333-acre tract, (with a grid coordinate of N = 13,828,768.84 E = 3,170,729.60);

THENCE North 43° 32' 45" East, over and across said 167.333-acre tract, a distance of 3,051.65 feet to the southwest corner and the **POINT OF BEGINNING** of said tract herein described, (with a grid coordinate of N = 13,830,980.49 E = 3,172,831.76);

THENCE North 01° 00' 22" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 157.29 feet to a point for an angle point of said tract herein described;

THENCE North 04° 45' 50" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 86.73 feet to a point for the most southerly northwest corner of said tract herein described;

THENCE North 28° 16' 06" East, over and across said 167.333-acre tract and with a northwest line of said tract herein described, a distance of 23.34 feet to a point for an interior angle point of said tract herein described;

THENCE North 01° 16' 04" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 32.18 feet to a point for the most northerly northwest corner of said tract herein described;

THENCE North 82° 42' 11" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 126.11 feet to a point for an angle point of said tract herein described;

THENCE North 88° 53' 30" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 128.51 feet to a point for the most northerly northeast corner of said tract herein described;

THENCE South 43° 31' 15" East, over and across said 167.333-acre tract and with a northeast line of said tract herein described, a distance of 18.11 feet to a point for an interior angle point of said tract herein described;

THENCE South 73° 14' 40" East, over and across said 167.333-acre tract and with a northeast line of said tract herein described, a distance of 25.31 feet to a point for the most easterly northeast corner of said tract herein described;

THENCE South 02° 36' 13" East, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 276.29 feet to a point for the southeast corner of said tract herein described;

THENCE South 87° 25' 11" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 112.60 feet to a point for an angle point of said tract herein described;

THENCE North 66° 18' 48" West, over and across said 167.333-acre tract and with a southwest line of said tract herein described, a distance of 24.85 feet to a point for an interior angle point of said tract herein described;

THENCE South 60° 43' 42" West, over and across said 167.333-acre tract and with a southeast line of said tract herein described, a distance of 7.18 feet to a point for an interior angle point of said tract herein described;

THENCE South 06° 32' 41" West, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 6.59 feet to a point for an angle point of said tract herein described;

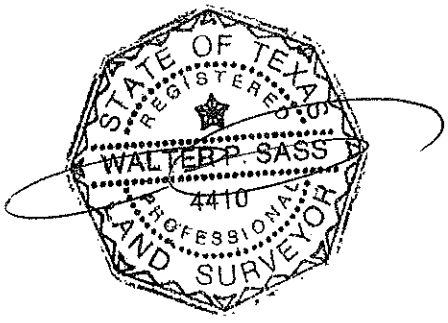
THENCE South 87° 22' 18" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 96.97 feet to a point for an angle point of said tract herein described;

THENCE South 82° 05'27" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 64.70 feet to the POINT OF BEGINNING and containing 2.035 acres (88,641 square feet) of land.

Compiled by:

Weisser Engineering Company
19500 Park Row, Suite 100
Houston, Texas 77084

Job No.: CT220 (1908-020)
Date: 5/21/13



20130509-0055

FILED

2013 JUN 25 PM 12:28

Stan Stanart

COUNTY CLERK
HARRIS COUNTY, TEXAS

ANY PROVISION HEREIN WHICH RESTRICTS THE SALE, RENTAL, OR USE OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW.

THE STATE OF TEXAS
COUNTY OF HARRIS

I hereby certify that this instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me; and was duly RECORDED, in the Official Public Records of Real Property of Harris County, Texas

JUN 25 2013

Stan Stanart

COUNTY CLERK
HARRIS COUNTY, TEXAS

8.

Notice

20130314021
06/25/2013 RP2 $44.00

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Harris County, Texas in compliance with the recordation requirements of said rules:

I

Pasadena Refining System, Inc. (PRSI) has performed a remediation of the land described herein (Tank 811 Firewall, part of SWMU 1). A list of the known constituents, including known concentrations, is attached hereto and is made part of this filing (Exhibit A). Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 30311 files, which are available for inspection upon request at the central office of the Texas Commission on Environmental Quality in Austin.

The Texas Commission on Environmental Quality derives its authority to review the remediation of this tract of land from 361.002 of the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361, which enables the Texas Commission on Environmental Quality to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to 5.012 and 5.013 of the Texas Water Code, Texas Water Code Ann. Chapter 5, the Texas Commission on Environmental Quality is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the Texas Commission on Environmental Quality requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the Texas Commission on Environmental Quality of the suitability of this land for any purpose, nor does it constitute any guarantee by the Texas Commission on Environmental Quality that the remediation standards specified in this certification have been met by PRSI.

II

Being a 1.517-acre (66,071 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas, said 1.517-acre tract being a portion of a 167.33-acre tract of land conveyed to Pasadena Refining System, Inc., as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County Texas and being more particularly described by metes and bounds as provided in Exhibit B. Exhibit B also provides a sketch of said 1.517-acre tract.

Return to: John Jones
PRSI
111 Red Bluff Rd
Pasadena TX
77506.

N060-5050-5250

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION
(Continued)

Contaminants and waste deposited hereon have been remediated to meet industrial/commercial soil criteria, in accordance with a plan designed to meet the Texas Commission on Environmental Quality 's requirements in 30 Texas Administrative Code §335.555 (Risk Reduction Standard No. 3), which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential. The current or future owner must undertake actions as necessary to protect human health or the environment in accordance with the rules of the Texas Commission on Environmental Quality.

III

The owner of the site is Pasadena Refining System, Inc. and its address is 111 Red Bluff Road, Pasadena, Texas 77506, where more specific information may be obtained from the plant manager.

EXECUTED this the 24th day of June, 2013

Pasadena Refining System, Inc.

USE

John Edmunds
Operations Director and COO

STATE OF TEXAS
HARRIS COUNTY

BEFORE ME, on this the 24 day of June, personally appeared Mr. John Edmunds, Operations Director and COO, of Pasadena Refining System, Inc. , known to me to be the person and agent of said corporation whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 24 day of June, 2013.

Iriva Lyn Sturdivant
Notary Public in and for the State of Texas
County of Harris County

NOTARY PUBLIC STATE OF TEXAS
IRIVA LYN STURDIVANT
My Commission Expires
February 9, 2014

My Commission Expires
2.9.2014

20130350 RR

Exhibit A: Table of Soil Concentrations

1995-05-29 243

Priority Group 5
(Tank 811 Firewall)
Known Constituents and Concentrations in Soils
Pasadena Refining Systems, Inc.

Constituent	Maximum Concentration (mg/Kg)
Total Phenols	185
Arsenic	3.7
Barium	230
Chromium	44.9
Lead	2090
Nickel	10.2
Zinc	82
Benzene	0.62
Ethylbenzene	0.127
Toluene	11
m,p-Xylenes	31
o-Xylenes	14
Benzo(a)anthracene	9.8
Naphthalene	120

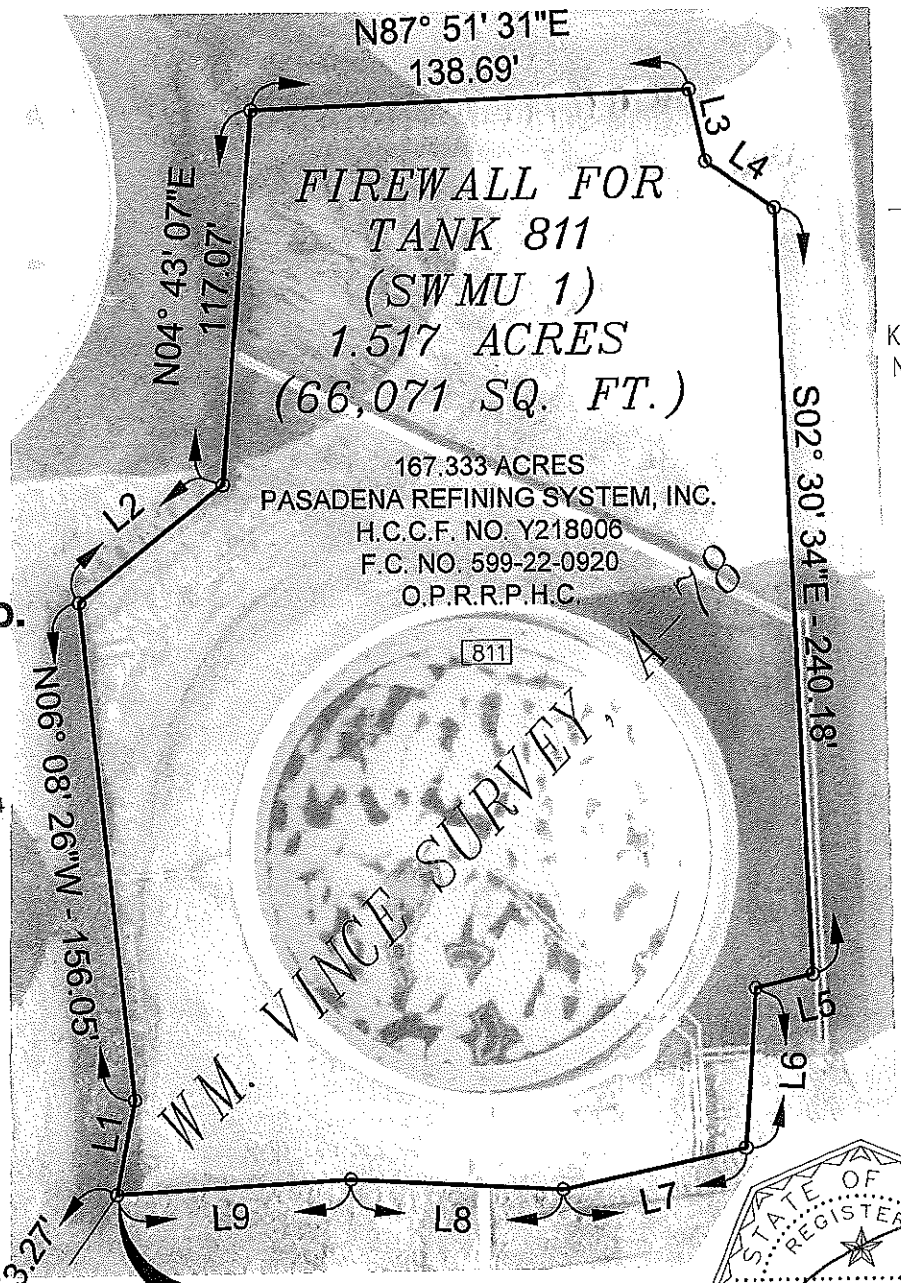
These values are based on sampling efforts conducted in the RCRA Facility Investigation (RFI) program for soils beneath the Solid Waste Management Units, some of which may have been removed or treated or covered with clean backfill material for corrective action in accordance with TCEQ authorization.

5850-50-2058-25

Exhibit B: Sketch and Area Metes & Bounds

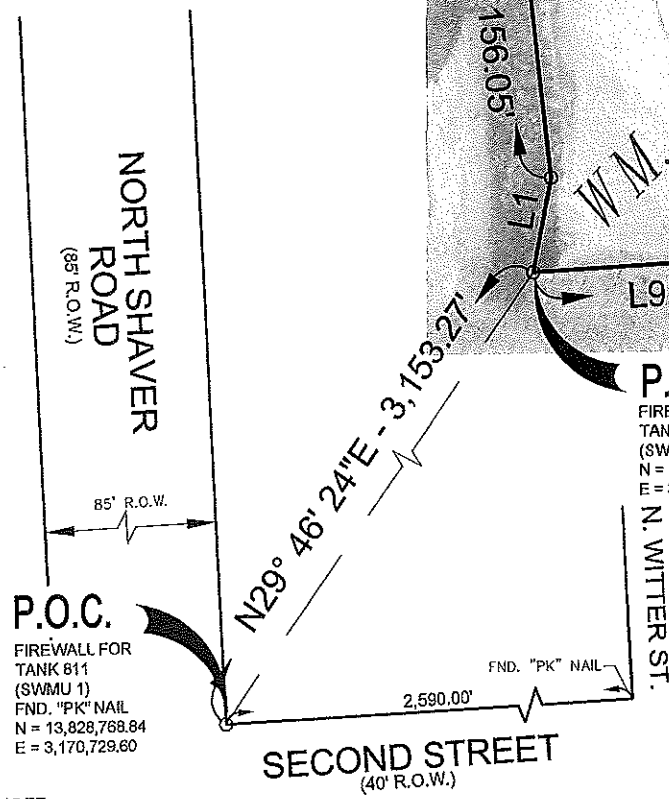
RP 097-9-0805

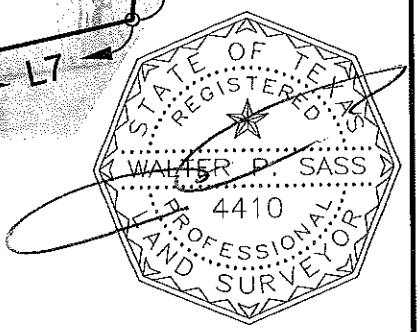
Line Table		
Line #	Length	Direction
L1	30.02'	N11° 16' 47"E
L2	58.35'	N51° 29' 54"E
L3	22.91'	S12° 44' 22"E
L4	26.48'	S56° 23' 10"E
L5	18.56'	S77° 02' 34"W
L6	50.09'	S03° 51' 39"W
L7	59.13'	S78° 15' 21"W
L8	67.67'	N86° 31' 07"W
L9	73.89'	S87° 05' 30"W



WEISSER
Engineering Co.
19500 Park Row, Suite 100
Houston, Texas 77084
(281) 579 - 7300
T.B.P.E.R. #F-68

BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE TEXAS SOUTH CENTRAL ZONE No. 4204 STATE PLANE GRID COORDINATES (NAD83)





NOTE:
THIS SURVEY IS BEING CREATED SOLELY FOR THE PARTIES HEREIN STATED; NO LICENSE HAS BEEN CREATED, EXPRESS OR IMPLIED, TO COPY THE SURVEY EXCEPT AS IS NECESSARY IN CONJUNCTION WITH THIS TRANSACTION.

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT. ALL ENCUMBRANCES MAY NOT BE SHOWN.

REVISION DATE: 04/02/2013

PRIORITY GROUP 5

SKETCH OF A 1.517-ACRE (66,071 SQ. FT.) TRACT SITUATED IN THE WM. VINCE SURVEY, A-78, HARRIS COUNTY, TEXAS

© Copyright 2013 Weisser Engineering Company, Inc.

DRAWN BY:	L.W.	CALC'D. BY:	J.H.	SCALE:	1" = 60'
F.B. NO:	2841	CHECKED BY:	M.B.	SHEET	01 OF 01
CREW CHIEF:	B.H.	DATE:	5/21/2013	JOB No.:	CT220 (1908-020)

P:\CT220\dwg\CT220_1.517_Acre_Tract.dwg, Layout 1, 05/23/13 9:44:24AM, jmichalik

FIREWALL FOR TANK 811 (SWMU 1)

**DESCRIPTION OF A 1.517-ACRE (66,071 SQ. FT.)
TRACT OF LAND SITUATED IN
THE WM. VINCE SURVEY, A-78,
HARRIS COUNTY, TEXAS**

Being a 1.517-acre (66,071 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas. Said 1.517-acre tract being a portion of a 167.333-acre tract of land conveyed to Pasadena Refining System, Inc. as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County, Texas, and being more particularly described by metes and bounds as follows with the bearings shown hereon based on Texas South Central Zone No. 4204 state plane grid coordinates (NAD 83);

COMMENCING at a "PK" nail found for the intersection of the east right-of-way line of North Shaver Road (85 foot wide right-of-way), and the north right-of-way line of Second Street (40 foot wide right-of-way) and for the southwest corner of said 167.333-acre tract, (with a grid coordinate of N = 13,828,768.84, E = 3,170,729.60);

THENCE North 29° 46' 24" East, over and across said 167.333-acre tract, a distance of 3,153.27 feet to the southwest corner and the **POINT OF BEGINNING** of said tract herein described, (with a grid coordinate of N = 13,831,505.57, E = 3,172,295.25);

THENCE North 11° 16' 47" East, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 30.02 feet to a point for an angle point of said tract herein described;

THENCE North 06° 08' 26" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 156.05 feet to a point for a northwest corner of said tract herein described;

THENCE North 51° 29' 54" East, over and across said 167.333-acre tract and with a northwest line of said tract herein described, a distance of 58.35 feet to a point for an interior angle point of said tract herein described;

THENCE North 04° 43' 07" East, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 117.07 feet to a point for a northwest corner of said tract herein described;

THENCE North 87° 51' 31" East, over and across said 167.333-acre tract and with the north line of said tract herein described, a distance of 138.69 feet to a point for a northeast corner of said tract herein described;

THENCE South 12° 44' 22" East, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 22.91 feet to a point for an interior angle point of said tract herein described;

THENCE South 56° 23' 10" East, over and across said 167.333-acre tract and with a northeast line of said tract herein described, a distance of 26.48 feet to a point for the most easterly northeast corner of said tract herein described;

THENCE South 02° 30' 34" East, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 240.18 feet to a point for a southeast corner of said tract herein described;

THENCE South 77° 02' 34" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 18.56 feet to a point for an interior angle point of said tract herein described;

THENCE South 03° 51' 39" West, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 50.09 feet to a point for a southeast corner of said tract herein described;

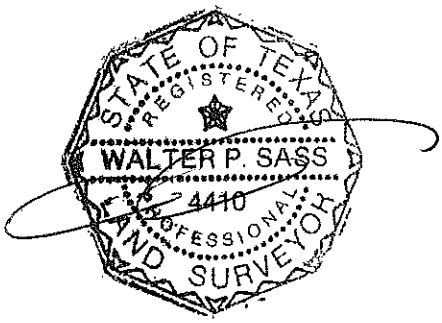
THENCE South 78° 15' 21" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 59.13 feet to a point for an angle point of said tract herein described;

THENCE North 86° 31' 07" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 67.67 feet to a point for an angle point of said tract herein described;

THENCE South 87° 05' 30" West, over and across said 167.333-acre tract and with a south line said tract herein described, a distance of 73.89 feet to the **POINT OF BEGINNING** and containing 1.517 acres (66,071 square feet) of land.

Compiled by:

Weisser Engineering Company
19500 Park Row, Suite 100
Houston, Texas 77084
Ze
Job No.: CT220 (1908-020)
Date: 5/21/13



RECORDER'S MEMORANDUM:
At the time of recordation, this instrument was found to be inadequate for the best photographic reproduction because of illegibility, carbon or photo copy, discolored paper, etc. All blockouts, additions and changes were present at the time the instrument was filed and recorded.

FILED

2013 JUN 25 PM 1:28

Stan Stanart

COUNTY CLERK
HARRIS COUNTY, TEXAS

ANY PROVISION HEREIN WHICH RESTRICTS THE SALE RENTAL, OR USE OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW.

THE STATE OF TEXAS
COUNTY OF HARRIS

I hereby certify that this instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me; and was duly RECORDED, in the Official Public Records of Real Property of Harris County, Texas

JUN 25 2013

Stan Stanart

COUNTY CLERK
HARRIS COUNTY, TEXAS

0690-69-4894

10
Notice

20130314026
06/25/2013 RP2 $52.00

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Harris County, Texas in compliance with the recordation requirements of said rules:

I

Pasadena Refining System, Inc. (PRSI) has performed a remediation of the land described herein (Firewalls for Tanks 824, 825, 826, 206, 207 (formerly Tank 207, now Tank 330), 331, and 820, all part of SWMU 1). A list of the known constituents, including known concentrations, is attached hereto and is made part of this filing (Exhibit A). Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 30311 files, which are available for inspection upon request at the central office of the Texas Commission on Environmental Quality in Austin.

The Texas Commission on Environmental Quality derives its authority to review the remediation of this tract of land from 361.002 of the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361, which enables the Texas Commission on Environmental Quality to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to 5.012 and 5.013 of the Texas Water Code, Texas Water Code Ann. Chapter 5, the Texas Commission on Environmental Quality is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the Texas Commission on Environmental Quality requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the Texas Commission on Environmental Quality of the suitability of this land for any purpose, nor does it constitute any guarantee by the Texas Commission on Environmental Quality that the remediation standards specified in this certification have been met by PRSI.

II

Being a 11.828-acre (515,221 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas, said 11.828-acre tract being a portion of a 167.33-acre tract of land conveyed to Pasadena Refining System, Inc., as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County Texas and being more particularly described by metes and bounds as provided in Exhibit B. Exhibit B also provides a sketch of said 11.828-acre tract.

Return to: John Jones
PRSI
111 Red Bluff Rd
Pasadena TX 77506

FILED FOR RECORD
2013 JUN 25 PM 1:50
COUNTY CLERK
HARRIS COUNTY, TEXAS

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION
(Continued)

Contaminants and waste deposited hereon have been remediated to meet industrial/commercial soil criteria, in accordance with a plan designed to meet the Texas Commission on Environmental Quality 's requirements in 30 Texas Administrative Code §335.555 (Risk Reduction Standard No. 3), which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential. The current or future owner must undertake actions as necessary to protect human health or the environment in accordance with the rules of the Texas Commission on Environmental Quality.

III

The owner of the site is Pasadena Refining System, Inc. and its address is 111 Red Bluff Road, Pasadena, Texas 77506, where more specific information may be obtained from the plant manager.

EXECUTED this the 24th day of June, 2013

Pasadena Refining System, Inc.

152

John Edmunds
Operations Director and COO

STATE OF TEXAS
HARRIS COUNTY

BEFORE ME, on this the 24 day of June, personally appeared Mr. John Edmunds, Operations Director and COO, of Pasadena Refining System, Inc., known to me to be the person and agent of said corporation whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 24 day of June, 2013.

Iriva Lyn Sturdivant
Notary Public in and for the State of Texas
County of Harris County

NOTARY PUBLIC STATE OF TEXAS
IRIVA LYN STURDIVANT
My Commission Expires
February 9, 2014

My Commission Expires
2.9.2014

N950-150-152

Exhibit A: Table of Soil Concentrations

5000-050-1000 5/5

Priority Group 4
(which includes Firewalls for Tanks 824, 825, 826, 206, 207, 331, and 820)
Known Constituents and Concentrations in Soils
Pasadena Refining Systems, Inc.

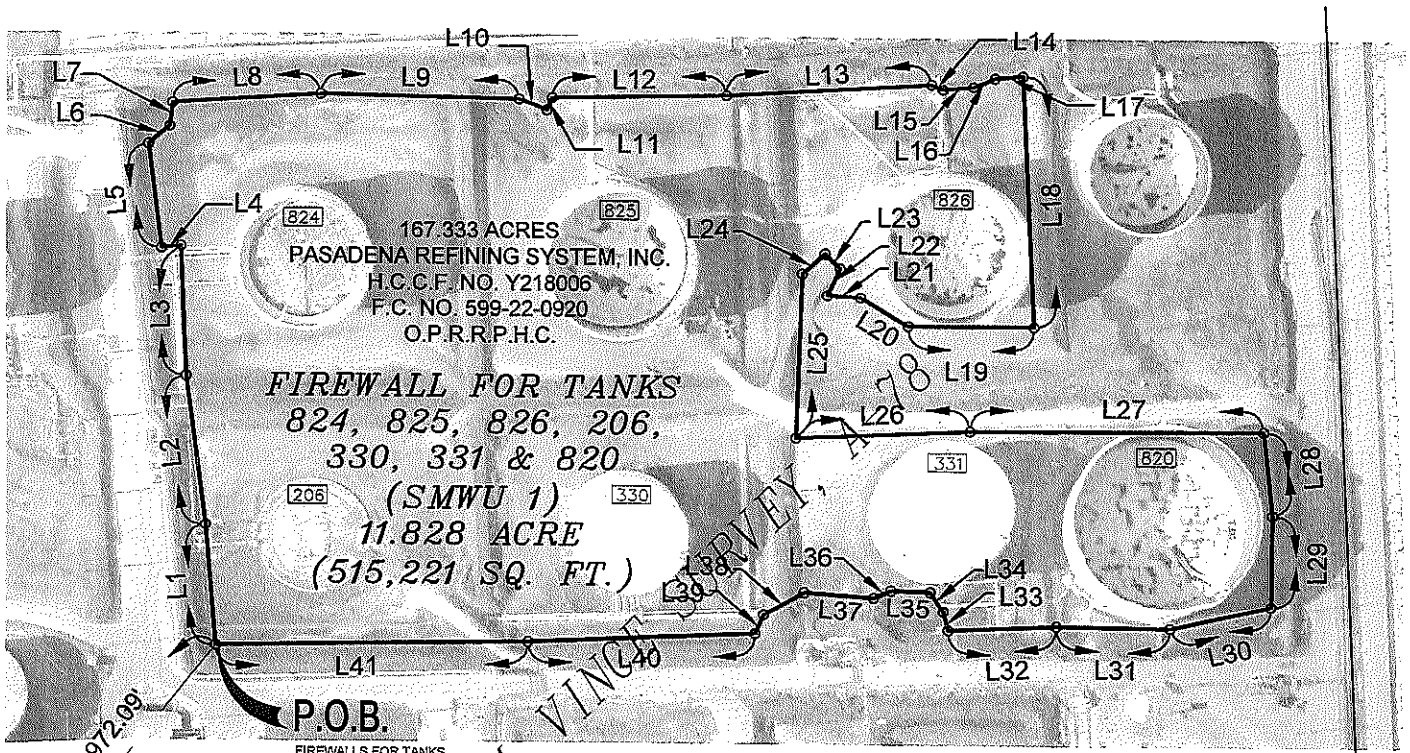
Constituent	Maximum Concentration (mg/Kg)
Total Phenols	408
Arsenic	12.1
Barium	471
Chromium	178
Lead	5170
Nickel	20.3
Zinc	285
Benzene	0.35
Methylene Chloride	0.11
Toluene	16
m,p-Xylenes	69
o-Xylenes	17
Benzo(a)anthracene	9
Naphthalene	109

These values are based on sampling efforts conducted in the RCRA Facility Investigation (RFI) program for soils beneath the Solid Waste Management Units, some of which may have been removed or treated or covered with clean backfill material for corrective action in accordance with TCEQ authorization.

RN102535257 CN603176364

Exhibit B: Sketch and Area Metes & Bounds

5565-56-5565 ES



KEY MAP
No. 536-C&D

NORTH SHAVER ROAD
(85' R.O.W.)
85' R.O.W.

N43° 13' 33"E - 1,972.09'

FIREWALLS FOR TANKS
824, 825, 826, 206,
330, 331 & 820
(SWMU 1)
N = 13,830,205.65
E = 3,172,080.09

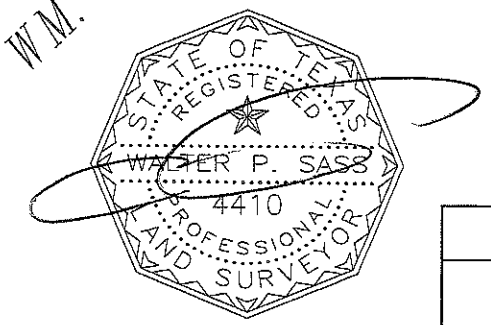
N. WITTER ST.

P.O.C.
FIREWALL FOR TANKS
824, 825, 826, 206,
330, 331 & 820
(SWMU 1)
FND. "PK" NAIL
N = 13,828,768.84
E = 3,170,729.60

FND. "PK" NAIL

2,590.00'

SECOND STREET (40' R.O.W.)



WEISSER
Engineering Co.
19500 Park Row, Suite 100
Houston, Texas 77084
(281) 579 - 7300
T.B.P.E.R. #F-68

BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE TEXAS SOUTH CENTRAL ZONE No. 4204 STATE PLANE GRID COORDINATES (NAD83)

NOTE:
THIS SURVEY IS BEING CREATED SOLELY FOR THE PARTIES HEREIN STATED; NO LICENSE HAS BEEN CREATED, EXPRESS OR IMPLIED, TO COPY THE SURVEY EXCEPT AS IS NECESSARY IN CONJUNCTION WITH THIS TRANSACTION.

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT. ALL ENCUMBRANCES MAY NOT BE SHOWN.

REVISION DATE: 04/11/2013

PRIORITY GROUP 4

SKETCH OF AN 11.828-ACRE (515,221 SQ. FT.) TRACT SITUATED IN THE WM. VINCE SURVEY, A-78, HARRIS COUNTY, TEXAS

© Copyright 2013 Weisser Engineering Company, Inc.

DRAWN BY:	L.W.	CALC'D. BY:	J.H.	SCALE:	1" = 200'
F.B. NO:	2841	CHECKED BY:	M.B.	SHEET	01 OF 02
CREW CHIEF:	B.H.	DATE:	05/21/2013	JOB No.:	CT220 (1908-020)

FIREWALL FOR TANKS 824, 825, 826, 206, 330, 331 & 820 (SWMU 1)

DESCRIPTION OF AN 11.828-ACRE (515,221 SQ. FT.)
TRACT OF LAND SITUATED IN
THE WM. VINCE SURVEY, A-78,
HARRIS COUNTY, TEXAS

Being an 11.828-acre (515,221 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas. Said 11.828-acre tract being a portion of a 167.333-acre tract of land conveyed to Pasadena Refining System, Inc. as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County, Texas, and being more particularly described by metes and bounds as follows with the bearings shown hereon based on the Texas South Central Zone No. 4204 state plane grid coordinates (NAD 83);

COMMENCING at a "PK" nail found for the intersection of the east right-of-way line of North Shaver Road (85 foot wide right-of-way), and the north right-of-way line of Second Street (40 foot wide right-of-way) and for the southwest corner of said 167.333-acre tract, (with a grid coordinate of N = 13,828,768.84, E = 3,170,729.60);

THENCE North 43° 13' 33" East, over and across said 167.333-acre tract, a distance of 1,972.09 feet to the southwest corner and the **POINT OF BEGINNING** of said tract herein described, (with a grid coordinate of N = 13,830,205.66, E = 3,172,080.09);

THENCE North 04° 50' 23" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 127.78 feet to a point for an angle point of said tract herein described;

THENCE North 07° 27' 54" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 158.72 feet to a point for an angle point of said tract herein described;

THENCE North 02° 20' 20" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 136.70 feet to a point for an interior corner of said tract herein described;

THENCE South 84° 04' 53" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 20.24 feet to a point for a southwest corner of said tract herein described;

THENCE North 07° 03' 52" West, over and across said 167.333-acre tract and with the most westerly west line of said tract herein described, a distance of 109.96 feet to a point for an angle point of said tract herein described;

THENCE North 49° 05' 28" East, over and across said 167.333-acre tract and with a northwest line of said tract herein described, a distance of 28.98 feet to a point for an angle point of said tract herein described;

THENCE North 06° 51' 19" East, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 25.23 feet to a point for the most northerly northwest corner of said tract herein described;

THENCE North 86° 08' 25" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 154.34 feet to a point for an angle point of said tract herein described;

THENCE South 88° 47' 46" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 205.03 feet to a point for an angle point of said tract herein described;

THENCE South 68° 21' 13" East, over and across said 167.333-acre tract and with a northeast line of said tract herein described, a distance of 31.09 feet to a point for an angle point of said tract herein described;

THENCE North 22° 55' 14" East, over and across said 167.333-acre tract and with a northwest line of said tract herein described, a distance of 14.42 feet to a point for an angle point of said tract herein described;

THENCE North 88° 51' 06" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 181.02 feet to a point for an angle point of said tract herein described;

THENCE North 86° 14' 13" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 213.34 feet to a point for an angle point of said tract herein described;

THENCE South 66° 28' 03" East, over and across said 167.333-acre tract and with a northeast line of said tract herein described, a distance of 12.96 feet to a point for an angle point of said tract herein described;

THENCE North 84° 14' 14" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 31.78 feet to a point for an angle point of said tract herein described;

THENCE North 67° 14' 35" East, over and across said 167.333-acre tract and with a northwest line of said tract herein described, a distance of 24.13 feet to a point for an angle point of said tract herein described;

THENCE North 85° 24' 46" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 29.20 feet to a point for the most northerly northeast corner of said tract herein described;

THENCE South 02° 42' 25" East, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 265.25 feet to a point for the most northerly southeast corner of said tract herein described;

THENCE North 89° 57' 19" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 130.94 feet to a point for an angle point of said tract herein described;

THENCE North 59° 00' 21" West, over and across said 167.333-acre tract and with a southwest line of said tract herein described, a distance of 57.65 feet to a point for an angle point of said tract herein described;

THENCE North 86° 33' 08" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 34.40 feet to a point for an angle point of said tract herein described;

THENCE North 24° 36' 54" East, over and across said 167.333-acre tract and with a northwest line of said tract herein described, a distance of 31.41 feet to a point for an interior angle point of said tract herein described;

THENCE North 45° 59' 44" West, over and across said 167.333-acre tract and with a southwest line of said tract herein described, a distance of 21.49 feet to a point for an interior angle point of said tract herein described;

THENCE South 48° 46' 16" West, over and across said 167.333-acre tract and with a southeast line of said tract herein described, a distance of 31.45 feet to a point for an interior angle point of said tract herein described;

THENCE South 02° 07' 20" West, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 173.58 feet to a point for an interior angle point of said tract herein described;

THENCE North 87° 18' 41" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 180.80 feet to a point for an angle point of said tract herein described;

THENCE North 89° 41' 07" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 304.64 feet to a point for the most easterly northeast corner of said tract herein described;

THENCE South 06° 04' 55" East, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 89.00 feet to a point for an angle point of said tract herein described;

THENCE South 00° 36' 43" West, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 97.37 feet to a point for the most southerly southeast corner of said tract herein described;

THENCE South 77° 25' 08" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 107.30 feet to a point for an angle point of said tract herein described;

THENCE North 89° 21' 14" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 117.76 feet to a point for an angle point of said tract herein described;

THENCE South 87° 30' 44" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 112.47 feet to a point for an angle point of said tract herein described;

RECORDER'S MEMORANDUM:
At the time of recordation, this instrument was found to be inadequate for the best photographic reproduction because of illegibility, carbon or photo copy, discolored paper, etc. All blockouts, additions and changes were present at the time the instrument was filed and recorded.

THENCE North 14° 56' 03" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 20.09 feet to a point for an angle point of said tract herein described;

THENCE North 32° 49' 43" West, over and across said 167.333-acre tract and with a southwest line of said tract herein described, a distance of 24.92 feet to a point for an interior angle point of said tract herein described;

THENCE North 88° 15' 52" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 40.97 feet to a point for an angle point of said tract herein described;

THENCE South 67° 05' 14" West, over and across said 167.333-acre tract and with a southeast line of said tract herein described, a distance of 19.56 feet to a point for an angle point of said tract herein described;

THENCE North 85° 58' 20" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 72.20 feet to a point for an angle point of said tract herein described;

THENCE South 59° 57' 08" West, over and across said 167.333-acre tract and with a southeast line of said tract herein described, a distance of 48.46 feet to a point for an angle point of said tract herein described;

THENCE South 24° 04' 11" West, over and across said 167.333-acre tract and with a southeast line of said tract herein described, a distance of 21.87 feet to a point for an angle point of said tract herein described;

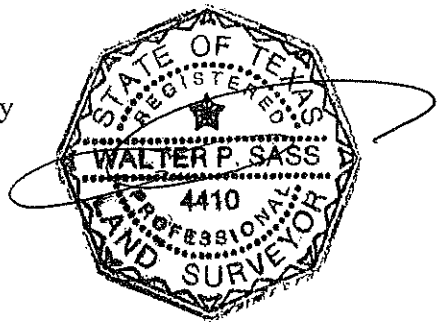
THENCE South 87° 30' 46" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 236.51 feet to a point for an angle point of said tract herein described;

THENCE South 88° 59' 35" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 323.86 feet to the **POINT OF BEGINNING** and containing 11.828 acres (515,221 square feet) of land.

Compiled by:

Weisser Engineering Company
19500 Park Row, Suite 100
Houston, Texas 77084

Job No.: CT220 (1908-020)
Date: 5/21/13



FILED

2013 JUN 25 PM 12:29

Stan Stanart

COUNTY CLERK
HARRIS COUNTY, TEXAS

ANY PROVISION HEREIN WHICH RESTRICTS THE SALE RENTAL, OR USE OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW.

THE STATE OF TEXAS
COUNTY OF HARRIS

I hereby certify that this instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me; and was duly RECORDED, in the Official Public Records of Real Property of Harris County, Texas

JUN 25 2013

Stan Stanart

COUNTY CLERK
HARRIS COUNTY, TEXAS

E969-53-520 32

9

Notice

m

20130314027
06/25/2013 RP2 $48.00

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Harris County, Texas in compliance with the recordation requirements of said rules:

I

Pasadena Refining System, Inc. (PRSI) has performed a remediation of the land described herein (Firewalls for Tanks 1, 2 [formerly Tank 2, now Tank 210], 97, 47, 50, and 51, all part of SWMU 1). A list of the known constituents, including known concentrations, is attached hereto and is made part of this filing (Exhibit A). Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 30311 files, which are available for inspection upon request at the central office of the Texas Commission on Environmental Quality in Austin.

The Texas Commission on Environmental Quality derives its authority to review the remediation of this tract of land from 361.002 of the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361, which enables the Texas Commission on Environmental Quality to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to 5.012 and 5.013 of the Texas Water Code, Texas Water Code Ann. Chapter 5, the Texas Commission on Environmental Quality is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the Texas Commission on Environmental Quality requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the Texas Commission on Environmental Quality of the suitability of this land for any purpose, nor does it constitute any guarantee by the Texas Commission on Environmental Quality that the remediation standards specified in this certification have been met by PRSI.

II

Being a 7.712-acre (335,952 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas, said 7.712-acre tract being a portion of a 167.33-acre tract of land conveyed to Pasadena Refining System, Inc., as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County Texas and being more particularly described by metes and bounds as provided in Exhibit B. Exhibit B also provides a sketch of said 7.712-acre tract.

Return to: John Jones.
PRSI
111 Red Bluff Rd
Pasadena, TX 77506

N050-050-250

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION
(Continued)

Contaminants and waste deposited hereon have been remediated to meet industrial/commercial soil criteria, in accordance with a plan designed to meet the Texas Commission on Environmental Quality 's requirements in 30 Texas Administrative Code §335.555 (Risk Reduction Standard No. 3), which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential. The current or future owner must undertake actions as necessary to protect human health or the environment in accordance with the rules of the Texas Commission on Environmental Quality.

III

The owner of the site is Pasadena Refining System, Inc. and its address is 111 Red Bluff Road, Pasadena, Texas 77506, where more specific information may be obtained from the plant manager.

EXECUTED this the 24th day of June, 2013

VOL

Pasadena Refining System, Inc.

Operations Director and COO

STATE OF TEXAS
HARRIS COUNTY

BEFORE ME, on this the 24 day of June, personally appeared Mr. John Edmunds, Operations Director and COO, of Pasadena Refining System, Inc. , known to me to be the person and agent of said corporation whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 24 day of June, 2013.

Iriva Lyn Sturdivant
Notary Public in and for the State of Texas
County of Harris County

My Commission Expires
2·9·2014

NOTARY PUBLIC STATE OF TEXAS
IRIVA LYN STURDIVANT
My Commission Expires
February 9, 2014

Exhibit A: Table of Soil Concentrations

Priority Group 3
(which includes Firewalls for Tanks 1, 2, 97, 47, 50, and 51)
Known Constituents and Concentrations in Soils
Pasadena Refining Systems, Inc.

Constituent	Maximum Concentration (mg/Kg)
Total Phenols	26
Arsenic	7.95
Barium	500
Cadmium	1.2
Chromium	130
Lead	4700
Nickel	34
Zinc	190
Benzene	6.1
Ethylbenzene	0.405
Toluene	49
m,p-Xylenes	310
o-Xylenes	60
Naphthalene	25

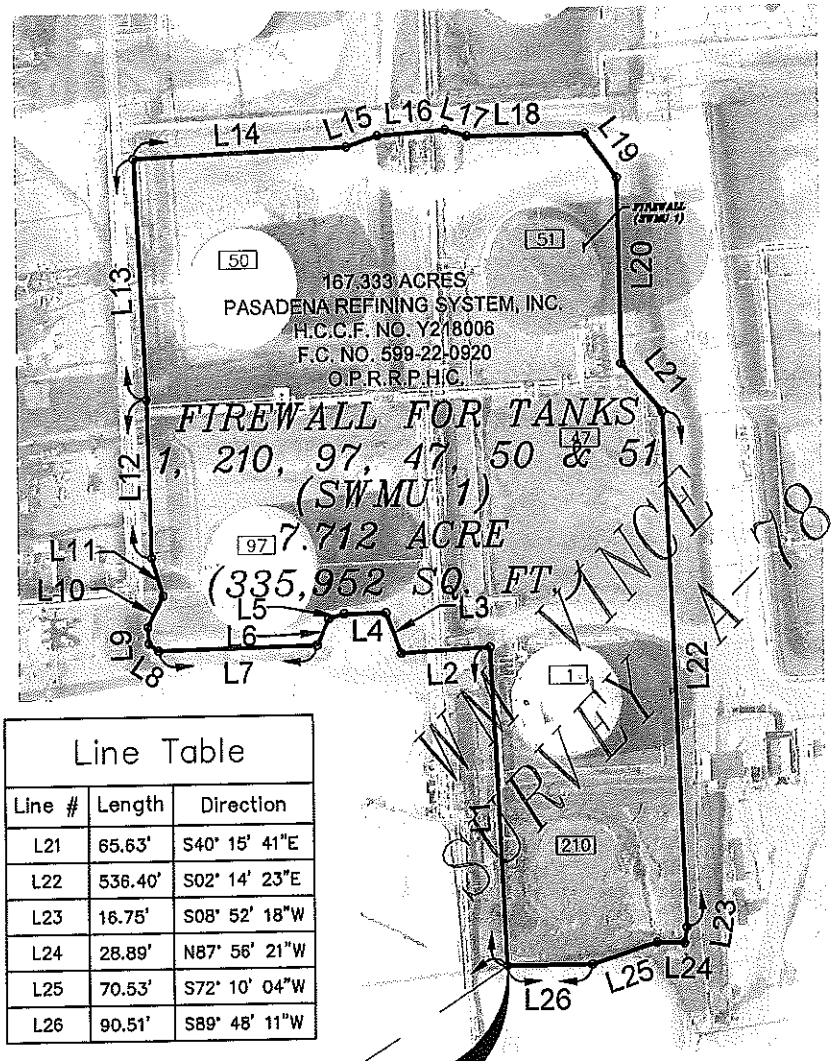
These values are based on sampling efforts conducted in the RCRA Facility Investigation (RFI) program for soils beneath the Solid Waste Management Units, some of which may have been removed or treated or covered with clean backfill material for corrective action in accordance with TCEQ authorization.

EPA-R6-2020-000264

Exhibit B: Sketch and Area Metes & Bounds

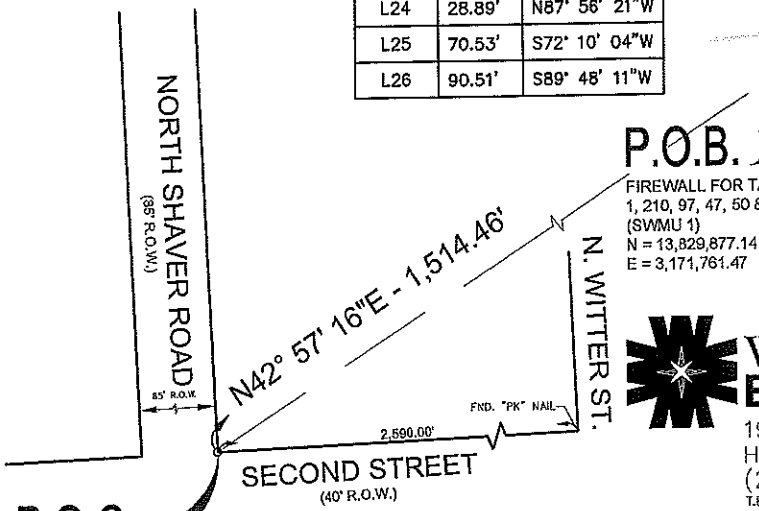
0000-00-000 EX

Line Table		
Line #	Length	Direction
L1	331.52'	N02° 45' 29"W
L2	93.92'	S86° 48' 17"W
L3	44.87'	N20° 07' 20"W
L4	43.61'	S89° 34' 51"W
L5	16.84'	S72° 51' 00"W
L6	29.99'	S24° 54' 18"W
L7	169.14'	S88° 44' 55"W
L8	13.21'	N54° 39' 16"W
L9	17.15'	N02° 55' 55"W
L10	36.46'	N27° 19' 54"E
L11	41.81'	N16° 23' 27"W
L12	164.40'	N01° 26' 52"W
L13	250.89'	N02° 33' 00"W
L14	226.68'	N87° 37' 33"E
L15	34.80'	N71° 24' 00"E
L16	70.62'	N85° 45' 02"E
L17	23.50'	S73° 02' 05"E
L18	126.31'	N89° 36' 49"E
L19	56.81'	S35° 27' 18"E
L20	194.07'	S00° 47' 55"E



KEY MAP
No. 536-C&D

Line Table		
Line #	Length	Direction
L21	65.63'	S40° 15' 41"E
L22	536.40'	S02° 14' 23"E
L23	16.75'	S08° 52' 18"W
L24	28.89'	N87° 56' 21"W
L25	70.53'	S72° 10' 04"W
L26	90.51'	S89° 48' 11"W



P.O.B.
FIREWALL FOR TANKS
1, 210, 97, 47, 50 & 51
(SWMU 1)
N = 13,829,877.14
E = 3,171,761.47

P.O.C.
FIREWALL FOR TANKS
1, 210, 97, 47, 50 & 51
(SWMU 1)
FND. "PK" NAIL
N = 13,828,768.84
E = 3,170,729.60

WEISSER
Engineering Co.
19500 Park Row, Suite 100
Houston, Texas 77084
(281) 579 - 7300
T.B.P.E.R. #F-68

STATE OF TEXAS
REGISTERED
WALTER P. SASS
4410
PROFESSIONAL
LAND SURVEYOR

BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE TEXAS SOUTH CENTRAL ZONE No. 4204 STATE PLANE GRID COORDINATES (NAD83)

NOTE:
THIS SURVEY IS BEING CREATED SOLELY FOR THE PARTIES HEREIN STATED; NO LICENSE HAS BEEN CREATED, EXPRESS OR IMPLIED, TO COPY THE SURVEY EXCEPT AS IS NECESSARY IN CONJUNCTION WITH THIS TRANSACTION.

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT. ALL ENCUMBRANCES MAY NOT BE SHOWN.

REVISION DATE: 04/02/2013

PRIORITY GROUP 3

SKETCH OF A 7.712-ACRE (335,952 SQ. FT.) TRACT SITUATED IN THE WM. VINCE SURVEY, A-78, HARRIS COUNTY, TEXAS

© Copyright 2013 Weisser Engineering Company, Inc.

DRAWN BY:	L.W.	CALC'D. BY:	J.H.	SCALE:	1" = 200'
F.B. NO:	2841	CHECKED BY:	M.B.	SHEET	01 OF 01
CREW CHIEF:	B.H.	DATE:	5/21/2013	JOB No.:	CT220 (1908-020)

P:\CT220\dwg\CT220_7.712_Acre_Tract.dwg, Layout 1, 05/23/13 10:08:09AM, jmichalik

FIREWALL FOR TANKS 1, 210, 97, 47, 50 & 51 (SWMU 1)

DESCRIPTION OF A 7.712-ACRE (335,952 SQ. FT.)
TRACT OF LAND SITUATED IN
THE WM. VINCE SURVEY, A-78,
HARRIS COUNTY, TEXAS

Being a 7.712-acre (335,952 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas. Said 7.712-acre tract being a portion of a 167.333-acre tract of land conveyed to Pasadena Refining System, Inc. as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County, Texas, and being more particularly described by metes and bounds as follows with the bearings shown hereon based on the Texas State Plane Coordinate System, South Central Zone No. 4204 state plane grid coordinates (NAD 83);

COMMENCING at a "PK" nail found for the intersection of the east right-of-way line of North Shaver Road (85 foot wide right-of-way), and the north right-of-way line of Second Street (40 foot wide right-of-way) and for the southwest corner of said 167.333-acre tract, (with a State Plane grid coordinate of N = 13,828,768.84, E = 3,170,729.60);

THENCE North 42° 57' 16" East, over and across said 167.333-acre tract, a distance of 1,514.46 feet to the most southerly southwest corner and the **POINT OF BEGINNING** of said tract herein described, (with a State Plane grid coordinate of N = 13,829,877.14, E = 3,171,761.46);

THENCE North 02° 45' 29" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 331.52 feet to a point for an interior corner of said tract herein described;

THENCE South 86° 48' 17" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 93.92 feet to a point for an angle point of said tract herein described;

THENCE North 20° 07' 20" West, over and across said 167.333-acre tract and with a southwest line of said tract herein described, a distance of 44.87 feet to a point for an interior corner of said tract herein described;

THENCE South 89° 34' 51" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 43.61 feet to a point for an angle point of said tract herein described;

THENCE South 72° 51' 00" West, over and across said 167.333-acre tract and with a southeast line of said tract herein described, a distance of 16.84 feet to a point for an interior corner of said tract herein described;

THENCE South 24° 54' 18" West, over and across said 167.333-acre tract and with a southeast line of said tract herein described, a distance of 29.99 feet to a point for an angle point of said tract herein described;

THENCE South 88° 44' 55" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 169.14 feet to a point for an angle point of said tract herein described;

THENCE North 54° 39' 16" West, over and across said 167.333-acre tract and with a southwest line of said tract herein described, a distance of 13.21 feet to a point for a southwest corner of said tract herein described;

THENCE North 02° 55' 55" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 17.15 feet to a point for an angle point of said tract herein described;

THENCE North 27° 19' 54" East, over and across said 167.333-acre tract and with a northwest line of said tract herein described, a distance of 36.46 feet to a point for an angle point of said tract herein described;

THENCE North 16° 23' 27" West, over and across said 167.333-acre tract and with a southwest line of said tract herein described, a distance of 41.81 feet to a point for an angle point of said tract herein described;

THENCE North 01° 26' 52" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 164.40 feet to a point for an angle point of said tract herein described;

THENCE North 02° 33' 00" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 250.89 feet to a point for the northwest corner of said tract herein described;

THENCE North 87° 37' 33" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 226.68 feet to a point for an angle point of said tract herein described;

THENCE North 71° 24' 00" East, over and across said 167.333-acre tract and with a northwest line of said tract herein described, a distance of 34.80 feet to a point for an angle point of said tract herein described;

THENCE North 85° 45' 02" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 70.62 feet to a point for an angle point of said tract herein described;

THENCE South 73° 02' 05" East, over and across said 167.333-acre tract and with a northeast line of said tract herein described, a distance of 23.50 feet to a point for an angle point of said tract herein described;

THENCE North 89° 36' 49" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 126.31 feet to a point for a northeast corner of said tract herein described;

THENCE South 35° 27' 18" East, over and across said 167.333-acre tract and with a northeast line of said tract herein described, a distance of 56.81 feet to a point for an angle point of said tract herein described;

THENCE South 00° 47' 55" East, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 194.07 feet to a point for an angle point of said tract herein described;

THENCE South 40° 15' 41" East, over and across said 167.333-acre tract and with a northeast line of said tract herein described, a distance of 65.63 feet to a point for an angle point of said tract herein described;

THENCE South 02° 14' 23" East, over and across said 167.333-acre tract and with a east line of said tract herein described, a distance of 536.40 feet to a point for an angle point of said tract herein described;

THENCE South 08° 52' 18" West, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 16.75 feet to a point for the southeast corner of said tract herein described;

THENCE North 87° 56' 21" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 28.89 feet to a point for an angle point of said tract herein described;

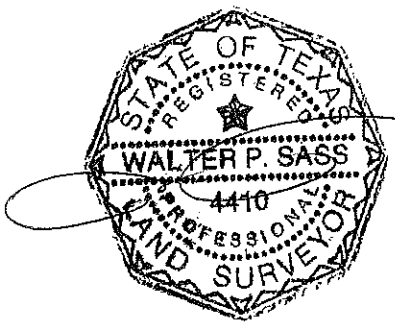
THENCE South 72° 10' 04" West, over and across said 167.333-acre tract and with a southeast line of said tract herein described, a distance of 70.53 feet to a point for an angle point of said tract herein described;

THENCE South 89° 48' 11" West, over and across said 167.333-acre tract and with the south line said tract herein described, a distance of 90.51 feet to the **POINT OF BEGINNING** and containing 7.712 acres (335,952 square feet) of land.

Compiled by:

Weisser Engineering Company
19500 Park Row, Suite 100
Houston, Texas 77084

Job No.: CT220 (1908-020)
Date: 5/21/13



RECORDER'S MEMORANDUM:
At the time of recordation, this instrument was found to be inadequate for the best photographic reproduction because of illegibility, carbon or photo copy, discolored paper, etc. All blockouts, additions and changes were present at the time the instrument was filed and recorded.

FILED

2013 JUN 25 PM 1:23

Stan Stanart

COUNTY CLERK
HARRIS COUNTY, TEXAS

ANY PROVISION HEREIN WHICH RESTRICTS THE SALE RENTAL OR USE OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW.

THE STATE OF TEXAS
COUNTY OF HARRIS

I hereby certify that this instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me; and was duly RECORDED, in the Official Public Records of Real Property of Harris County, Texas

JUN 25 2013

Stan Stanart

COUNTY CLERK
HARRIS COUNTY, TEXAS

FT60-69-280 MF

20130314029
06/25/2013 RP2 $44.00

NOTICE

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Harris County, Texas in compliance with the recordation requirements of said rules:

I

Pasadena Refining System, Inc. (PRSI) has performed a remediation of the land described herein (Tank 85 Firewall, part of SWMU 1). A list of the known constituents, including known concentrations, is attached hereto and is made part of this filing (Exhibit A). Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 30311 files, which are available for inspection upon request at the central office of the Texas Commission on Environmental Quality in Austin.

The Texas Commission on Environmental Quality derives its authority to review the remediation of this tract of land from 361.002 of the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361, which enables the Texas Commission on Environmental Quality to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to 5.012 and 5.013 of the Texas Water Code, Texas Water Code Ann. Chapter 5, the Texas Commission on Environmental Quality is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the Texas Commission on Environmental Quality requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the Texas Commission on Environmental Quality of the suitability of this land for any purpose, nor does it constitute any guarantee by the Texas Commission on Environmental Quality that the remediation standards specified in this certification have been met by PRSI.

II

Being a 0.475-acre tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas, said 0.475-acre tract being a portion of a 167.33-acre tract of land conveyed to Pasadena Refining System, Inc., as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County Texas and being more particularly described by metes and bounds as provided in Exhibit B. Exhibit B also provides a sketch of said 0.475-acre tract.

Return to: John Jones
PRSI
111 Red Bluff Rd.
Pasadena, TX
77506

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION
(Continued)

Contaminants and waste deposited hereon have been remediated to meet industrial/commercial soil criteria, in accordance with a plan designed to meet the Texas Commission on Environmental Quality 's requirements in 30 Texas Administrative Code §335.555 (Risk Reduction Standard No. 3), which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential. The current or future owner must undertake actions as necessary to protect human health or the environment in accordance with the rules of the Texas Commission on Environmental Quality.

III

The owner of the site is Pasadena Refining System, Inc. and its address is 111 Red Bluff Road, Pasadena, Texas 77506, where more specific information may be obtained from the plant manager.

EXECUTED this the 24th day of June, 2013

Pasadena Refining System, Inc.

Operations Director and COO

STATE OF TEXAS
HARRIS COUNTY

BEFORE ME, on this the 24 day of June, personally appeared Mr. John Edmunds, Operations Director and COO, of Pasadena Refining System, Inc. , known to me to be the person and agent of said corporation whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 24 day of June, 2013.

Iriva Lyn Sturdivant

Notary Public in and for the State of Texas
County of Harris County

IRIVA LYN STURDIVANT
My Commission Expires
February 9, 2014

My Commission Expires
2.9.2014

Exhibit A: Table of Soil Concentrations

NNSS-50-2553

Priority Group 2
(which includes Sandblast Grit Pile and Tank 85 Firewall)
Known Constituents and Concentrations in Soils
Pasadena Refining Systems, Inc.

Constituent	Maximum Concentration (mg/Kg)
Total Phenols	24.4
Arsenic	4.03
Barium	197
Chromium	110
Lead	992
Nickel	13.8
Zinc	13.8
Benzene	0.152
Ethylbenzene	0.0102
Toluene	0.21
Total Xylenes	1.38
Benzo(a)anthracene	0.01
Naphthalene	0.0067

These values are based on sampling efforts conducted in the RCRA Facility Investigation (RFI) program for soils beneath the Solid Waste Management Units, some of which may have been removed or treated or covered with clean backfill material for corrective action in accordance with TCEQ authorization.

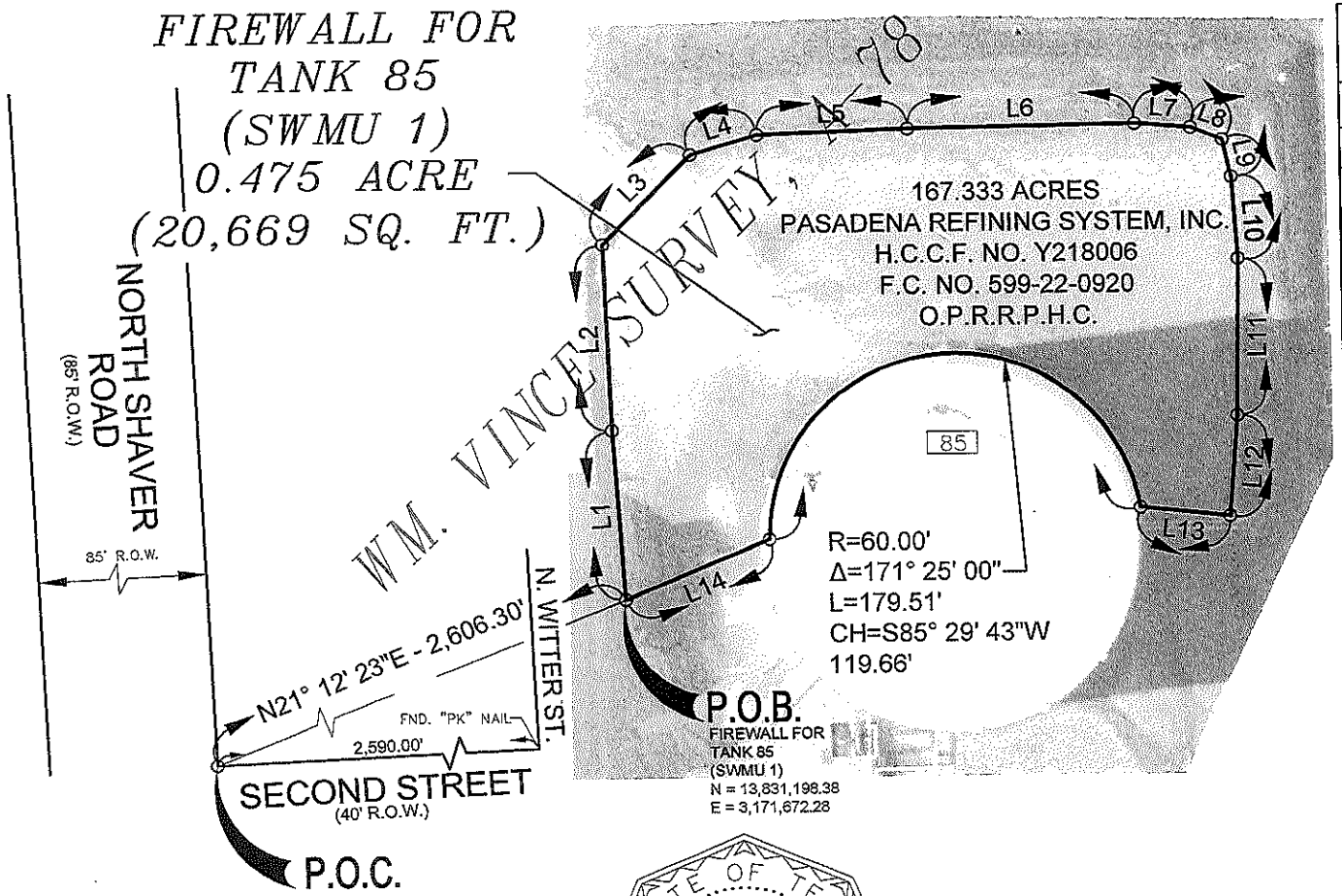
EXHIBIT 4

Exhibit B: Sketch and Area Metes & Bounds

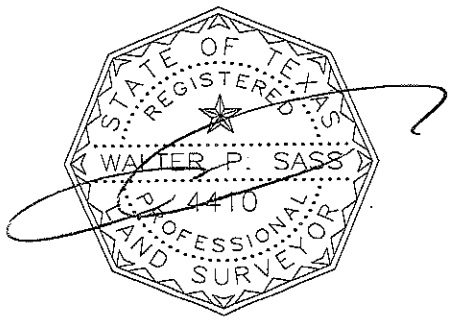
VOL-850-PAGE

P:\CT220\dwg\CT220_Tank 85.dwg, Layout 1, 05/23/13 9:58.59AM, jmichalik

FIREWALL FOR TANK 85 (SWMU 1) 0.475 ACRE (20,669 SQ. FT.)



Line Table		
Line #	Length	Direction
L1	55.54'	N03° 47' 23"W
L2	60.50'	N01° 59' 14"W
L3	40.98'	N44° 28' 58"E
L4	22.36'	N73° 28' 08"E
L5	48.36'	N88° 04' 06"E
L6	72.97'	N89° 13' 47"E
L7	18.06'	S85° 31' 21"E
L8	10.90'	S68° 34' 21"E
L9	12.67'	S12° 12' 55"E
L10	26.79'	S03° 52' 20"E
L11	51.04'	S01° 06' 09"W
L12	32.88'	S04° 55' 19"W
L13	28.93'	N83° 56' 05"W
L14	50.36'	S67° 15' 55"W



BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE BASED ON THE TEXAS SOUTH CENTRAL ZONE No. 4204 STATE PLANE GRID COORDINATES (NAD83)

NOTE:
THIS SURVEY IS BEING CREATED SOLELY FOR THE PARTIES HEREIN STATED; NO LICENSE HAS BEEN CREATED, EXPRESS OR IMPLIED, TO COPY THE SURVEY EXCEPT AS IS NECESSARY IN CONJUNCTION WITH THIS TRANSACTION.

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT. ALL ENCUMBRANCES MAY NOT BE SHOWN.

WEISSER Engineering Co.
19500 Park Row, Suite 100
Houston, Texas 77084
(281) 579 – 7300
T.B.P.E.R. #F-68

PRIORITY GROUP 2

SKETCH OF A 0.475-ACRE (20,669 SQ. FT.) TRACT SITUATED IN THE WM. VINCE SURVEY, A-78, HARRIS COUNTY, TEXAS

© Copyright 2013 Weisser Engineering Company, Inc.

DRAWN BY:	C.M.	CALC'D. BY:	J.H.	SCALE:	1" = 60'
F.B. NO:	2841	CHECKED BY:	M.B.	SHEET	01 OF 01
CREW CHIEF:	B.H.	DATE:	05/21/2013	JOB No.:	CT220 (1908-020)

S260-69-280 JZ

P:\CT220\dwg\CT220_Tank 85.dwg, Layout 1, 05/23/13 9:58.59AM, jmichalik

FIREWALL FOR TANK 85
(SWMU 1)

DESCRIPTION OF A 0.475-ACRE (20,669 SQ. FT.)
TRACT OF LAND SITUATED IN
THE WM. VINCE SURVEY, A-78,
HARRIS COUNTY, TEXAS

Being a 0.475-acre (20,669 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas. Said 0.475-acre tract being a portion of a 167.333-acre tract of land conveyed to Pasadena Refining System, Inc. as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County, Texas, and being more particularly described by metes and bounds as follows with the bearings shown hereon based on Texas South Central Zone No. 4204 state plane grid coordinates (NAD 83);

COMMENCING at a "PK" nail found for the intersection of the east right-of-way line of North Shaver Road (85 foot wide right-of-way), and the north right-of-way line of Second Street (40 foot wide right-of-way) and for the southwest corner of said 167.333-acre tract, (with a grid coordinate of N = 13,828,768.84, E = 3,170,729.60);

THENCE North 21° 12' 23" East, over and across said 167.333-acre tract, a distance of 2,606.30 feet to the southwest corner and the **POINT OF BEGINNING** of said tract herein described, (with a grid coordinate of N = 13,831,198.38, E = 3,171,672.28);

THENCE North 03° 47' 23" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 55.54 feet to a point for an angle point of said tract herein described;

THENCE North 01° 59' 14" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 60.50 feet to a point for the most southerly northwest corner of said tract herein described;

THENCE North 44° 28' 58" East, over and across said 167.333-acre tract and with a northwest line of said tract herein described, a distance of 22.36 feet to a point for an angle point of said tract herein described;

THENCE North 88° 04' 06" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 48.36 feet to a point for an angle point of said tract herein described;

THENCE North 89° 13' 47" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 72.97 feet to a point for an angle point of said tract herein described;

THENCE South 85° 31' 21" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 18.06 feet to a point for an angle point of said tract herein described;

THENCE South 68° 34' 21" East, over and across said 167.333-acre tract and with a northeast line of said tract herein described, a distance of 10.90 feet to a point for the northeast corner of said tract herein described;

THENCE South 12° 12' 55" East, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 12.67 feet to a point for an angle point of said tract herein described;

THENCE South 03° 52' 20" East, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 26.79 feet to a point for an angle point of said tract herein described;

THENCE South 01° 06' 09" West, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 51.04 feet to a point for the southeast corner of said tract herein described;

THENCE South 04° 55' 19" West, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 32.88 feet to a point for the southeast corner of said tract herein described;

THENCE South 83° 56' 05" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 28.93 feet to a point for a non-tangent curve to the left of said tract herein described;

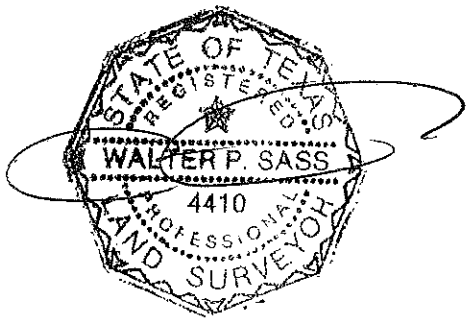
THENCE along said curve to the left, over and across said 167.333-acre tract, with a south line of said tract herein described, said curve to the left having a radius of 60.00 feet, a central angle of 171° 25' 00", an arc length of 179.51 feet, a chord bearing of South 85° 29' 43" West, and a chord length of 119.66 feet to a point for an angle point of said tract herein described;

THENCE South 67° 15' 55" West, over and across said 167.333-acre tract and with a southeast line said tract herein described, a distance of 50.36 feet to the **POINT OF BEGINNING** and containing 0.475 acre (20,669 square feet) of land.

Compiled by:

Weisser Engineering Company
19500 Park Row, Suite 100
Houston, Texas 77084

Job No.: CT220 (1908-020)
Date: 5/21/13



RECORDER'S MEMORANDUM:
At the time of recordation, this instrument was found to be inadequate for the best photographic reproduction because of illegibility, carbon or photo copy, discolored paper, etc. All blockouts, additions and changes were present at the time the instrument was filed and recorded.

20130150258

FILED

2013 JUN 25 PM 12:26

Stan Stanart

COUNTY CLERK
HARRIS COUNTY, TEXAS

20130-359-1580 54

ANY PROVISION HEREIN WHICH RESTRICTS THE SALE, RENTAL, OR USE OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW.

THE STATE OF TEXAS
COUNTY OF HARRIS

I hereby certify that this instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me; and was duly RECORDED, in the Official Public Records of Real Property of Harris County, Texas

JUN 25 2013

Stan Stanart

COUNTY CLERK
HARRIS COUNTY, TEXAS

7

20130314012
06/25/2013 RP2 $40.00

Notice

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Harris County, Texas in compliance with the recordation requirements of said rules:

I

Pasadena Refining System, Inc. (PRSI) has performed a remediation of the land described herein (Buried Cell near the Bauxite Pond, SWMU 2). A list of the known constituents, including known concentrations, is attached hereto and is made part of this filing (Exhibit A). Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 30311 files, which are available for inspection upon request at the central office of the Texas Commission on Environmental Quality in Austin.

The Texas Commission on Environmental Quality derives its authority to review the remediation of this tract of land from 361.002 of the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361, which enables the Texas Commission on Environmental Quality to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to 5.012 and 5.013 of the Texas Water Code, Texas Water Code Ann. Chapter 5, the Texas Commission on Environmental Quality is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the Texas Commission on Environmental Quality requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the Texas Commission on Environmental Quality of the suitability of this land for any purpose, nor does it constitute any guarantee by the Texas Commission on Environmental Quality that the remediation standards specified in this certification have been met by PRSI.

II

Being a 0.118-acre (5,146 square feet) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas, said 0.118-acre tract being a portion of a 167.33-acre tract of land conveyed to Pasadena Refining System, Inc., as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County Texas and being more particularly described by metes and bounds as provided in Exhibit B. Exhibit B also provides a sketch of said 0.118-acre tract.

Return to: John Jones
PRSI
111 Red Bluff Rd
Pasadena, TX
77506

RP-2013-95832

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION
(Continued)

Contaminants and waste deposited hereon have been remediated to meet industrial/commercial soil criteria, in accordance with a plan designed to meet the Texas Commission on Environmental Quality 's requirements in 30 Texas Administrative Code §335.555 (Risk Reduction Standard No. 3), which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential. The current or future owner must undertake actions as necessary to protect human health or the environment in accordance with the rules of the Texas Commission on Environmental Quality.

III

The owner of the site is Pasadena Refining System, Inc. and its address is 111 Red Bluff Road, Pasadena, Texas 77506, where more specific information may be obtained from the plant manager.

EXECUTED this the 24th day of June, 2013

Pasadena Refining System, Inc.

Operations Director and COO

STATE OF TEXAS
HARRIS COUNTY

BEFORE ME, on this the 24 day of June, personally appeared Mr. John Edmunds, Operations Director and COO, of Pasadena Refining System, Inc. , known to me to be the person and agent of said corporation whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 24 day of June, 2013.

Iriva Lyn Sturdivant
Notary Public in and for the State of Texas
County of Harris County

My Commission Expires
2-9-2014

IRIVA LYN STURDIVANT
My Commission Expires
February 9, 2014

Exhibit A: Table of Soil Concentrations

5500-95-7500 Rev

Priority Group 8
(which includes Buried Cell Near Bauxite Pond, Area Immediately Surrounding Bauxite Pond, and Trap #2 Sump)
Known Constituents and Concentrations in Soils
Pasadena Refining Systems, Inc.

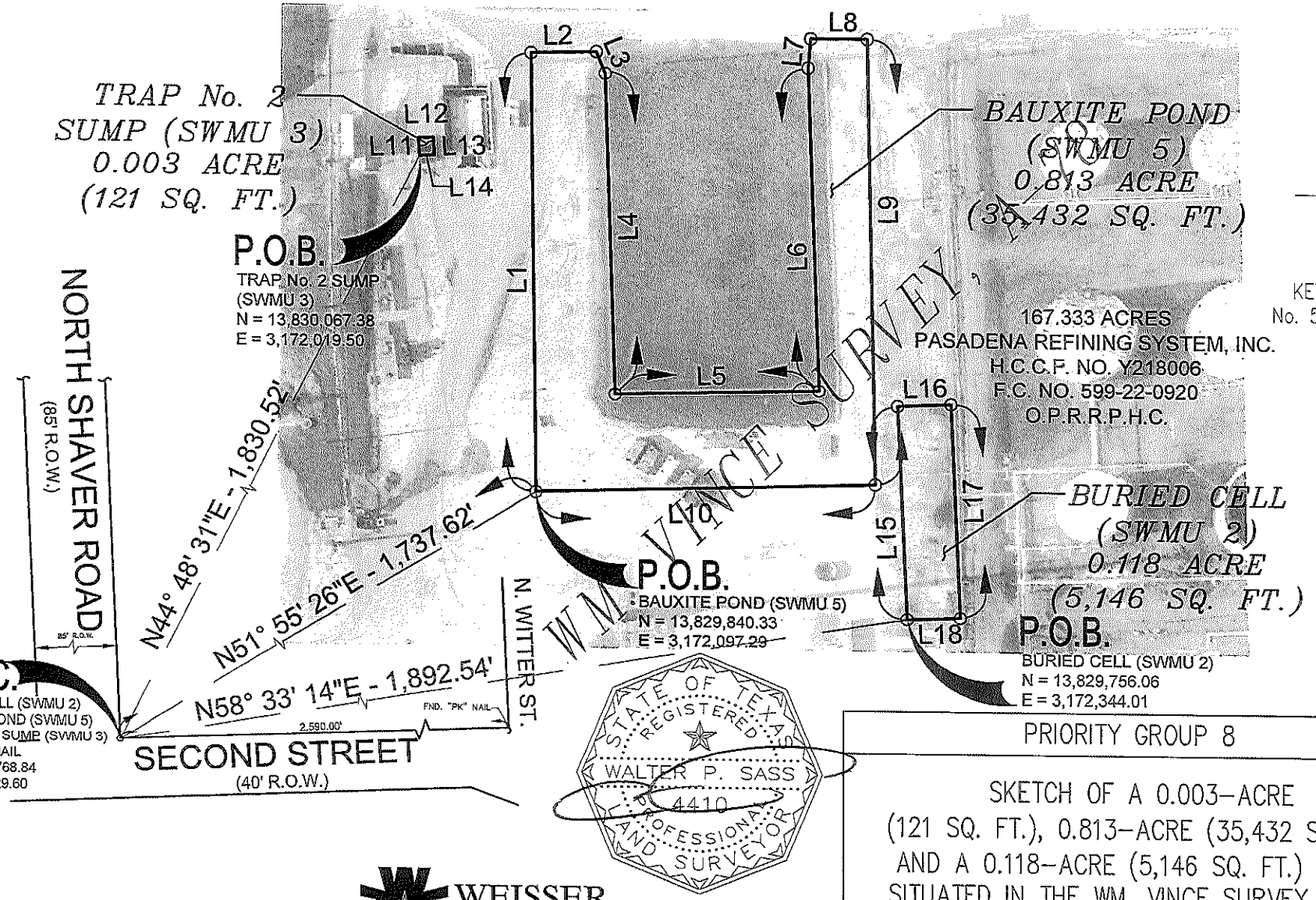
Constituent	Maximum Concentration (mg/Kg)
Total Phenols	16
Barium	760
Cadmium	1.2
Chromium	380
Lead	329
Nickel	40
Zinc	200
Benzene	0.93
Toluene	13
m,p-Xylenes	60
o-Xylenes	26
Benzo(a)anthracene	10
Naphthalene	55

These values are based on sampling efforts conducted in the RCRA Facility Investigation (RFI) program for soils beneath the Solid Waste Management Units, some of which may have been removed or treated or covered with clean backfill material for corrective action in accordance with TCEQ authorization.

Exhibit B: Sketch and Area Metes & Bounds

EXHIBIT 'B'

RP 087-63-0842



STATE OF TEXAS
REGISTERED
WALTER P. SASS
4410
PROFESSIONAL
LAND SURVEYOR

PRIORITY GROUP 8

SKETCH OF A 0.003-ACRE (121 SQ. FT.), 0.813-ACRE (35,432 SQ. FT.) AND A 0.118-ACRE (5,146 SQ. FT.) TRACT SITUATED IN THE WM. VINCE SURVEY, A-78, HARRIS COUNTY, TEXAS

© Copyright 2013 Weisser Engineering Company, Inc.

BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE TEXAS SOUTH CENTRAL ZONE No. 4204 STATE PLANE GRID COORDINATES (NAD83)

NOTE:
THIS SURVEY IS BEING CREATED SOLELY FOR THE PARTIES HEREIN STATED; NO LICENSE HAS BEEN CREATED, EXPRESS OR IMPLIED, TO COPY THE SURVEY EXCEPT AS IS NECESSARY IN CONJUNCTION WITH THIS TRANSACTION.

WEISSER
Engineering Co.
19500 Park Row, Suite 100
Houston, Texas 77084
(281) 579 - 7300
T.B.P.E.R. #F-68

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT. ALL ENCUMBRANCES MAY NOT BE SHOWN.
REVISION DATE: 04/11/2013

DRAWN BY:	L.W.	CALC'D. BY:	J.H.	SCALE:	1" = 100'
F.B. NO:	2841	CHECKED BY:	M.B.	SHEET	01 OF 02
CREW CHIEF:	B.H.	DATE:	5/21/2013	JOB No.:	CT220 (1908-020)

P:\CT220\dwg\CT220_Tract_Bauxite_Pond.dwg, Layout 1, 05/23/13 9:57:55AM, jmicholik

BURIED CELL
(SWMU 2)

DESCRIPTION OF A 0.118-ACRE (5,146 SQ. FT.)
TRACT OF LAND SITUATED IN
THE WM. VINCE SURVEY, A-78,
HARRIS COUNTY, TEXAS

Being a 0.118-acre (5,146 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas. Said 0.118-acre tract being a portion of a 167.333-acre tract of land conveyed to Pasadena Refining System, Inc. as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County, Texas, and being more particularly described by metes and bounds as follows with the bearings show hereon based on Texas South Central Zone No. 4204 state plane grid coordinates (NAD 83);

COMMENCING at a "PK" nail found for the intersection of the east right-of-way line of North Shaver Road (85 foot wide right-of-way), and the north right-of-way line of Second Street (40 foot wide right-of-way) and for the southwest corner of said 167.333-acre tract, (with a grid coordinate of N = 13,828,768.84, E = 3,170,729.60);

THENCE North 58° 33' 14" East, over and across said 167.333-acre tract, a distance of 1,892.54 feet to the southwest corner and the **POINT OF BEGINNING** of said tract herein described, (with a grid coordinate of N = 13,829,756.06, E = 3,172,344.01);

THENCE North 02° 38' 32" West, over and across said 167.333-acre tract and with the west line of said tract herein described, a distance of 144.84 feet to a point for the northwest corner of said tract herein described;

THENCE North 87° 32' 38" East, over and across said 167.333-acre tract and with the north line of said tract herein described, a distance of 35.61 feet to a point for the northeast corner of said tract herein described;

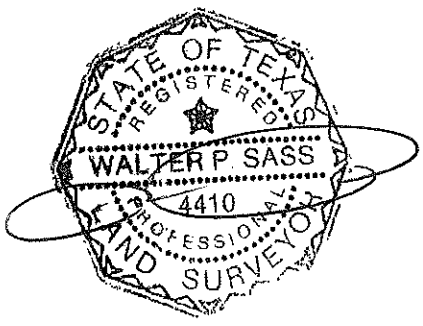
THENCE South 02° 33' 04" East, over and across said 167.333-acre tract and with the east line of said tract herein described, a distance of 145.12 feet to a point for the southeast corner of said tract herein described;

THENCE South 87° 59' 24" West, over and across said 167.333-acre tract and with the south line said tract herein described, a distance of 35.38 feet to the **POINT OF BEGINNING** and containing 0.118 acre (5,146 square feet) of land.

Compiled by:

Weisser Engineering Company
19500 Park Row, Suite 100
Houston, Texas 77084

Job No.: CT220 (1908-020)
Date: 5/21/13



FILED

2013 JUN 25 PM 12:22

Stan Stanart

COUNTY CLERK
HARRIS COUNTY, TEXAS

ANY PROVISION HEREIN WHICH RESTRICTS THE SALE, RENTAL, OR USE OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW.

THE STATE OF TEXAS
COUNTY OF HARRIS

I hereby certify that this instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me; and was duly RECORDED, in the Official Public Records of Real Property of Harris County, Texas

JUN 25 2013

Stan Stanart

COUNTY CLERK
HARRIS COUNTY, TEXAS

RP-2013-59-2-088 25

1

Notice

m

20130314011
06/25/2013 RP2 $40.00

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Harris County, Texas in compliance with the recordation requirements of said rules:

I

Pasadena Refining System, Inc. (PRSI) has performed a remediation of the land described herein (Trap No. 2 Sump, SWMU 3). A list of the known constituents, including known concentrations, is attached hereto and is made part of this filing (Exhibit A). Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 30311 files, which are available for inspection upon request at the central office of the Texas Commission on Environmental Quality in Austin.

The Texas Commission on Environmental Quality derives its authority to review the remediation of this tract of land from 361.002 of the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361, which enables the Texas Commission on Environmental Quality to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to 5.012 and 5.013 of the Texas Water Code, Texas Water Code Ann. Chapter 5, the Texas Commission on Environmental Quality is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the Texas Commission on Environmental Quality requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the Texas Commission on Environmental Quality of the suitability of this land for any purpose, nor does it constitute any guarantee by the Texas Commission on Environmental Quality that the remediation standards specified in this certification have been met by PRSI.

II

Being a 0.003-acre (121 square feet) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas, said 0.003-acre tract being a portion of a 167.33-acre tract of land conveyed to Pasadena Refining Systems, Inc., as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County Texas and being more particularly described by metes and bounds as provided in Exhibit B. Exhibit B also provides a sketch of said 0.003-acre tract.

we

Return to: John Jones
PRSI
111 Red Bluff Rd
Pasadena, TX 77506

ENGINEERING SEAL

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION
(Continued)

Contaminants and waste deposited hereon have been remediated to meet industrial/commercial soil criteria, in accordance with a plan designed to meet the Texas Commission on Environmental Quality 's requirements in 30 Texas Administrative Code §335.555 (Risk Reduction Standard No. 3), which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential. The current or future owner must undertake actions as necessary to protect human health or the environment in accordance with the rules of the Texas Commission on Environmental Quality.

III

The owner of the site is Pasadena Refining System, Inc. and its address is 111 Red Bluff Road, Pasadena, Texas 77506, where more specific information may be obtained from the plant manager.

EXECUTED this the 24th day of June, 2013

VOL

Pasadena Refining System, Inc.

John Edmunds
Operations Director and COO

STATE OF TEXAS
HARRIS COUNTY

BEFORE ME, on this the 24 day of June, personally appeared Mr. John Edmunds, Operations Director and COO, of Pasadena Refining System, Inc. , known to me to be the person and agent of said corporation whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 24 day of June, 2013.

Iriva Lyn Sturdivant
Notary Public in and for the State of Texas
County of Harris County

NOTARY PUBLIC STATE OF TEXAS
IRIVA LYN STURDIVANT
My Commission Expires
February 9, 2014

My Commission Expires
2.9.2014

20130500 0

Exhibit A: Table of Soil Concentrations

FOIA-EPA-R09-2022-000364

Priority Group 8
(which includes Buried Cell Near Bauxite Pond, Area Immediately Surrounding Bauxite Pond, and Trap #2 Sump)
Known Constituents and Concentrations in Soils
Pasadena Refining Systems, Inc.

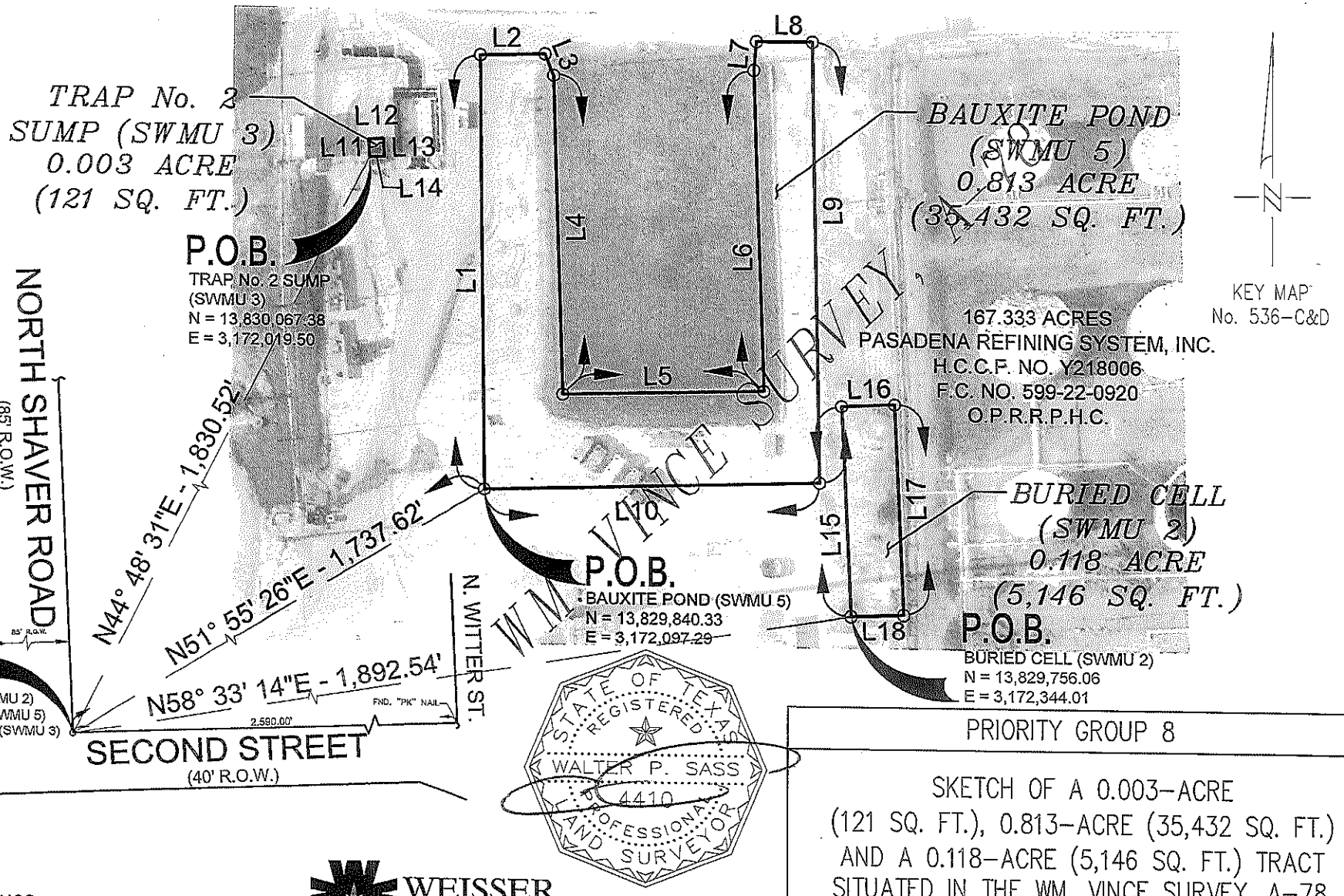
Constituent	Maximum Concentration (mg/Kg)
Total Phenols	16
Barium	760
Cadmium	1.2
Chromium	380
Lead	329
Nickel	40
Zinc	200
Benzene	0.93
Toluene	13
m,p-Xylenes	60
o-Xylenes	26
Benzo(a)anthracene	10
Naphthalene	55

These values are based on sampling efforts conducted in the RCRA Facility Investigation (RFI) program for soils beneath the Solid Waste Management Units, some of which may have been removed or treated or covered with clean backfill material for corrective action in accordance with TCEQ authorization.

Exhibit B: Sketch and Area Metes & Bounds

2005-0525-53

RP 087-63-0834



STATE OF TEXAS
REGISTERED
WALTER P. SASS
4410
PROFESSIONAL
LAND SURVEYOR

PRIORITY GROUP 8

SKETCH OF A 0.003-ACRE (121 SQ. FT.), 0.813-ACRE (35,432 SQ. FT.) AND A 0.118-ACRE (5,146 SQ. FT.) TRACT SITUATED IN THE WM. VINCE SURVEY, A-78, HARRIS COUNTY, TEXAS

© Copyright 2013 Weisser Engineering Company, Inc.

BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE TEXAS SOUTH CENTRAL ZONE No. 4204 STATE PLANE GRID COORDINATES (NAD83)

NOTE:
THIS SURVEY IS BEING CREATED SOLELY FOR THE PARTIES HEREIN STATED; NO LICENSE HAS BEEN CREATED, EXPRESS OR IMPLIED, TO COPY THE SURVEY EXCEPT AS IS NECESSARY IN CONJUNCTION WITH THIS TRANSACTION.

WEISSER
Engineering Co.
19500 Park Row, Suite 100
Houston, Texas 77084
(281) 579 - 7300
T.B.P.E.R. #F-68

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT. ALL ENCUMBRANCES MAY NOT BE SHOWN.
REVISION DATE: 04/11/2013

DRAWN BY:	L.W.	CALC'D. BY:	J.H.	SCALE:	1" = 100'
F.B. NO:	2841	CHECKED BY:	M.B.	SHEET	01 OF 02
CREW CHIEF:	B.H.	DATE:	5/21/2013	JOB No.:	CT220 (1908-020)

P:\CT220\dwg\CT220_Tract_Bauxite_Pond.dwg, Layout 1, 05/23/13 9:57:55AM, jrichalik

TRAP No. 2
(SWMU 3)

DESCRIPTION OF A 0.003-ACRE (121 SQ. FT.)
TRACT OF LAND SITUATED IN
THE WM. VINCE SURVEY, A-78,
HARRIS COUNTY, TEXAS

Being a 0.003-acre (121 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas. Said 0.003-acre tract being a portion of a 167.333-acre tract of land conveyed to Pasadena Refining System, Inc. as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County, Texas, and being more particularly described by metes and bounds as follows with the bearings show hereon based on Texas South Central Zone No. 4204 state plane grid coordinates (NAD 83);

COMMENCING at a "PK" nail found for the intersection of the east right-of-way line of North Shaver Road (85 foot wide right-of-way), and the north right-of-way line of Second Street (40 foot wide right-of-way) and for the southwest corner of said 167.333-acre tract, (with a grid coordinate of N = 13,828,768.84, E = 3,170,729.60);

THENCE North 44° 48' 31" East, over and across said 167.333-acre tract, a distance of 1,830.52 feet to the southwest corner and the **POINT OF BEGINNING** of said tract herein described, (with a grid coordinate of N = 13,830,067.38, E = 3,172,019.50);

THENCE North 03° 12' 08" West, over and across said 167.333-acre tract and with the west line of said tract herein described, a distance of 11.99 feet to a point for the northwest corner of said tract herein described;

THENCE North 87° 25' 10" East, over and across said 167.333-acre tract and with the north line of said tract herein described, a distance of 10.06 feet to a point for the northeast corner of said tract herein described;

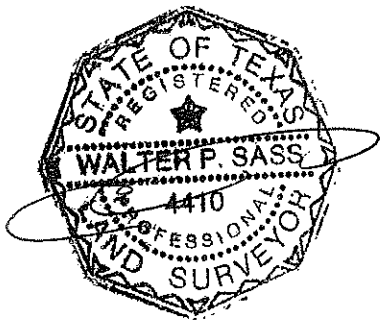
THENCE South 03° 02' 05" East, over and across said 167.333-acre tract and with the east line of said tract herein described, a distance of 12.01 feet to a point for the southeast corner of said tract herein described;

THENCE South 87° 31' 50" West, over and across said 167.333-acre tract and with the south line said tract herein described, a distance of 10.03 feet to the **POINT OF BEGINNING** and containing 0.003 acre (121 square feet) of land.

Compiled by:

Weisser Engineering Company
19500 Park Row, Suite 100
Houston, Texas 77084

Job No.: CT220 (1908-020)
Date: 5/21/13



FILED

2013 JUN 25 PM 1:22

Stan Stanart
COUNTY CLERK
HARRIS COUNTY, TEXAS

20130-69-4800 2/2

ANY PROVISION HEREIN WHICH RESTRICTS THE SALE RENTAL, OR USE OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW.

THE STATE OF TEXAS
COUNTY OF HARRIS

I hereby certify that this instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me; and was duly RECORDED, in the Official Public Records of Real Property of Harris County, Texas

JUN 25 2013

Stan Stanart
COUNTY CLERK
HARRIS COUNTY, TEXAS

10

Notice

20130314019
06/25/2013 RP2 $52.00

STATE OF TEXAS
HARRIS COUNTY

VM

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Harris County, Texas in compliance with the recordation requirements of said rules:

I

Pasadena Refining System, Inc. (PRSI) has performed a remediation of the land described herein (Gate 14 Waste Pile, SWMU 4). A list of the known constituents, including known concentrations, is attached hereto and is made part of this filing (Exhibit A). Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 30311 files, which are available for inspection upon request at the central office of the Texas Commission on Environmental Quality in Austin.

The Texas Commission on Environmental Quality derives its authority to review the remediation of this tract of land from 361.002 of the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361, which enables the Texas Commission on Environmental Quality to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to 5.012 and 5.013 of the Texas Water Code, Texas Water Code Ann. Chapter 5, the Texas Commission on Environmental Quality is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the Texas Commission on Environmental Quality requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the Texas Commission on Environmental Quality of the suitability of this land for any purpose, nor does it constitute any guarantee by the Texas Commission on Environmental Quality that the remediation standards specified in this certification have been met by PRSI.

II

Being a 1.347-acre (58,693 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas, said 1.347-acre tract being a portion of a 167.33-acre tract of land conveyed to Pasadena Refining System, Inc., as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County Texas and being more particularly described by metes and bounds as provided in Exhibit B. Exhibit B also provides a sketch of said 1.347-acre tract.

Return to: John Jones
PRSI
111 Red Bluff Rd.
Pasadena, TX 77506

599-59-1580 PG

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION
(Continued)

Contaminants and waste deposited hereon have been remediated to meet industrial/commercial soil criteria, in accordance with a plan designed to meet the Texas Commission on Environmental Quality 's requirements in 30 Texas Administrative Code §335.555 (Risk Reduction Standard No. 3), which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential. The current or future owner must undertake actions as necessary to protect human health or the environment in accordance with the rules of the Texas Commission on Environmental Quality.

III

The owner of the site is Pasadena Refining System, Inc. and its address is 111 Red Bluff Road, Pasadena, Texas 77506, where more specific information may be obtained from the plant manager.

EXECUTED this the 24th day of June, 2013

Pasadena Refining System, Inc.

John Edmunds
Operations Director and COO

STATE OF TEXAS
HARRIS COUNTY

BEFORE ME, on this the 24 day of June, personally appeared Mr. John Edmunds, Operations Director and COO of Pasadena Refining System, Inc. , known to me to be the person and agent of said corporation whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 24 day of June, 2013.

Iriva Lyn Sturdivant
Notary Public in and for the State of Texas
County of Harris County

NOTARY PUBLIC STATE OF TEXAS
IRIVA LYN STURDIVANT
My Commission Expires
February 9, 2014

My Commission Expires
2.9.2014

20130509-0000-0000

Exhibit A: Table of Soil Concentrations

EPA-CERCLIS

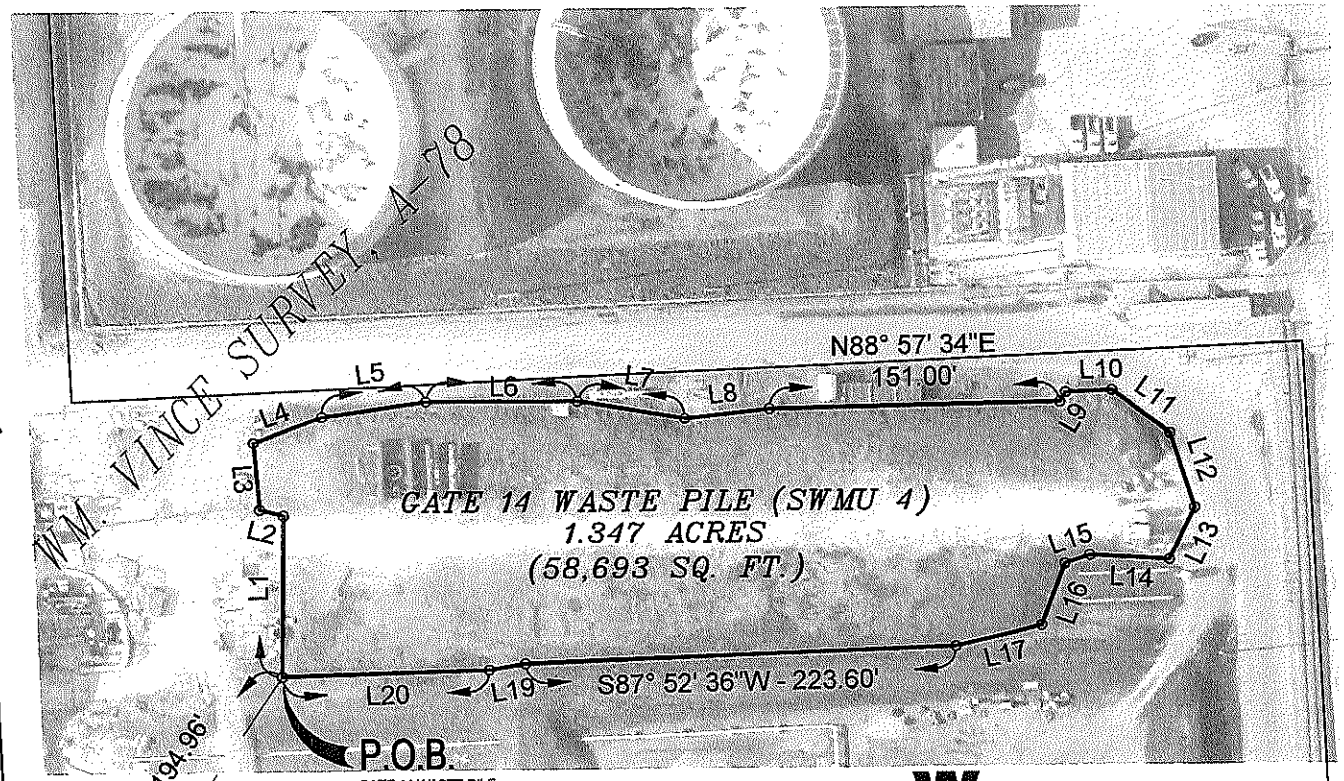
Priority Group 6
(which includes Gate 14 Waste Pile and Tank 332 Firewall)
Known Constituents and Concentrations in Soils
Pasadena Refining Systems, Inc.

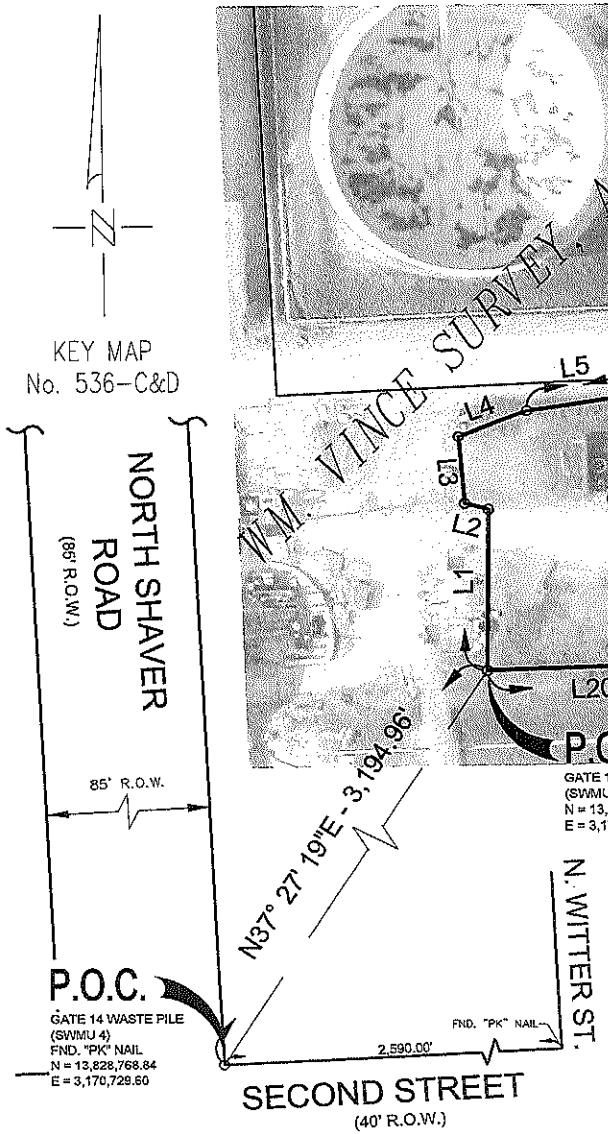
Constituent	Maximum Concentration (mg/Kg)
Total Phenols	800
Arsenic	11.8
Barium	796
Cadmium	0.7
Chromium	367
Cobalt	248
Lead	4000
Mercury	0.14
Nickel	68.1
Zinc	190
Benzene	2.7
Ethylbenzene	5.32
Toluene	61
m,p-Xylenes	91
o-Xylenes	35
Benzo(a)anthracene	36
Naphthalene	140

These values are based on sampling efforts conducted in the RCRA Facility Investigation (RFI) program for soils beneath the Solid Waste Management Units, some of which may have been removed or treated or covered with clean backfill material for corrective action in accordance with TCEQ authorization.

Exhibit B: Sketch and Area Metes & Bounds

R2-005-55-700





Line Table		
Line #	Length	Direction
L1	85.49'	N01° 09' 22"E
L2	12.80'	N75° 48' 42"W
L3	35.09'	N04° 39' 38"W
L4	38.18'	N69° 32' 56"E
L5	54.76'	N81° 49' 33"E
L6	78.49'	S89° 50' 17"E
L7	56.29'	S80° 26' 39"E
L8	44.29'	N83° 39' 14"E
L9	6.12'	N30° 39' 55"E
L10	24.12'	N87° 52' 41"E
L11	37.69'	S52° 35' 13"E
L12	40.90'	S17° 37' 29"E
L13	30.35'	S26° 12' 19"W
L14	41.62'	N86° 27' 51"W
L15	13.75'	S71° 16' 49"W
L16	34.67'	S20° 54' 32"W
L17	46.14'	S76° 00' 22"W
L18	18.91'	S80° 45' 32"W
L19	107.80'	S88° 20' 39"W

167.333 ACRES
PASADENA REFINING SYSTEM, INC.
H.C.C.F. NO. Y218006
F.C. NO. 599-22-0920
O.P.R.R.P.H.C.

WEISSER Engineering Co.
19500 Park Row, Suite 100
Houston, Texas 77084
(281) 579 - 7300
T.B.P.E.R. #F-68

STATE OF TEXAS
REGISTERED
WALTER P. SASS
4410
PROFESSIONAL
LAND SURVEYOR

BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE TEXAS SOUTH CENTRAL ZONE No. 4204 STATE PLANE GRID COORDINATES (NAD83)

NOTE: -
THIS SURVEY IS BEING CREATED SOLELY FOR THE PARTIES HEREIN STATED; NO LICENSE HAS BEEN CREATED, EXPRESS OR IMPLIED, TO COPY THE SURVEY EXCEPT AS IS NECESSARY IN CONJUNCTION WITH THIS TRANSACTION.

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT. ALL ENCUMBRANCES MAY NOT BE SHOWN.

REVISION DATE: 04/04/2013

PRIORITY GROUP 6

SKETCH OF A 1.347-ACRE (58,693 SQ. FT.) TRACT SITUATED IN THE WM. VINCE SURVEY, A-78, HARRIS COUNTY, TEXAS

© Copyright 2013 Weisser Engineering Company, Inc.

DRAWN BY:	L.W.	CALC'D. BY:	J.H.	SCALE:	1" = 100'
F.B. NO:	2841	CHECKED BY:	M.B.	SHEET	01 OF 01
CREW CHIEF:	B.H.	DATE:	5/21/2013	JOB No.:	CT220 (1908-020)

I:\Wdwg\Waste_Pile.dwg, Layout: 1, 5/21/2013 9:19:51 AM, jamus

GATE 14 WASTE PILE (SWMU 4)

**DESCRIPTION OF A 1.347-ACRE (58,693 SQ. FT.)
TRACT OF LAND SITUATED IN
THE WM. VINCE SURVEY, A-78,
HARRIS COUNTY, TEXAS**

Being a 1.347-acre (58,693 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas. Said 1.347-acre tract being a portion of a 167.333-acre tract of land conveyed to Pasadena Refining System, Inc. as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County, Texas, and being more particularly described by metes and bounds as follows with the bearings shown hereon based on the Texas South Central Zone No. 4204 state plane grid coordinates (NAD 83);

COMMENCING at a "PK" nail found for the intersection of the east right-of-way line of North Shaver Road (85 foot wide right-of-way), and the north right-of-way line of Second Street (4085 foot wide right-of-way) and for the southwest corner of said 167.333-acre tract, (with a grid coordinate of N = 13,828,768.84, E = 3,170,729.60);

THENCE North 37° 27' 19" East, over and across said 167.333-acre tract, a distance of 3,194.96 feet to the southwest corner and the **POINT OF BEGINNING** of said tract herein described, (with a grid coordinate of N = 13,831,304.80, E = 3,172,672.37);

THENCE North 01° 09' 22" East, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 85.49 feet to a point for an interior corner of said tract herein described;

THENCE North 75° 48' 42" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 12.80 feet to a point for the most southerly northwest corner of said tract herein described;

THENCE North 04° 39' 38" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 35.09 feet to a point for the most northerly northwest corner of said tract herein described;

THENCE North 69° 32' 56" East, over and across said 167.333-acre tract and with a northwest line of said tract herein described, a distance of 38.18 feet to a point for an angle point in said tract herein described;

THENCE North 81° 49' 33" East, over and across said 167.333-acre tract and with a northwest line of said tract herein described, a distance of 54.76 feet to a point for an angle point in said tract herein described;

THENCE South 89° 50' 17" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 78.49 feet to a point for an angle point in said tract herein described;

THENCE South 80° 26' 39" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 56.29 feet to a point for an angle point in said tract herein described;

THENCE North 83° 39' 14" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 44.29 feet to a point for an angle point in said tract herein described;

THENCE North 88° 57' 34" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 151.00 feet to a point for an angle point in said tract herein described;

THENCE North 30° 39' 55" East, over and across said 167.333-acre tract and with a northwest line of said tract herein described, a distance of 6.12 feet to a point for an angle point in said tract herein described;

THENCE North 87° 52' 41" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 24.12 feet to a point for an angle point in said tract herein described;

THENCE South 52° 35' 13" East, over and across said 167.333-acre tract and with a northeast line of said tract herein described, a distance of 37.69 feet to a point for an angle point in said tract herein described;

THENCE South 17° 37' 29" East, over and across said 167.333-acre tract and with a northeast line of said tract herein described, a distance of 40.90 feet to a point for an angle point in said tract herein described;

THENCE South 26° 12' 19" West, over and across said 167.333-acre tract and with a southeast line of said tract herein described, a distance of 30.35 feet to a point for the most easterly southwest corner of said tract herein described;

THENCE North 86° 27' 51" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 41.62 feet to a point for an angle point in said tract herein described;

THENCE South 71° 16' 49" West, over and across said 167.333-acre tract and with a southeast line of said tract herein described, a distance of 13.75 feet to a point for an interior angle point in said tract herein described;

THENCE South 20° 54' 32" West, over and across said 167.333-acre tract and with a southeast line of said tract herein described, a distance of 34.67 feet to a point for the most southerly southeast corner of in said tract herein described;

THENCE South 76° 00' 22" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 46.14 feet to a point for an angle point in said tract herein described;

THENCE South 87° 52' 36" West, over and across said 167.333-acre tract and with a southeast line of said tract herein described, a distance of 223.60 feet to a point for an angle point in said tract herein described;

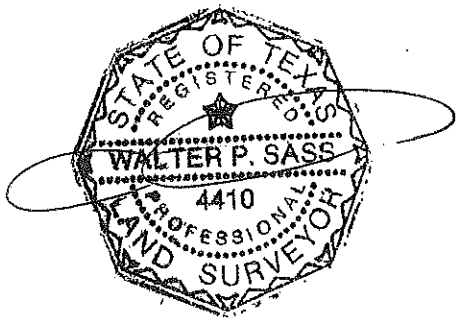
THENCE South 80° 45' 32" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 18.91 feet to a point for an angle point in said tract herein described;

THENCE South 88° 20' 39" West, over and across said 167.333-acre tract and with a south line said tract herein described, a distance of 107.80 feet to the **POINT OF BEGINNING** and containing 1.347 acres (58,693 square feet) of land.

Compiled by:

Weisser Engineering Company
19500 Park Row, Suite 100
Houston, Texas 77084

Job No.: CT220 (1908-020)
Date: 5/21/13



RP-2013-152952

FILED

2013 JUN 25 PM 12:22

Stan Stanart

COUNTY CLERK
HARRIS COUNTY, TEXAS

ANY PROVISION HEREIN WHICH RESTRICTS THE SALE, RENTAL, OR USE OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW.

THE STATE OF TEXAS
COUNTY OF HARRIS

I hereby certify that this instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me; and was duly RECORDED, in the Official Public Records of Real Property of Harris County, Texas

JUN 25 2013

Stan Stanart
COUNTY CLERK
HARRIS COUNTY, TEXAS

20130-63-1760 345

8.

20130314014
06/25/2013 RP2 $44.00

None

m

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Harris County, Texas in compliance with the recordation requirements of said rules:

I

Pasadena Refining System, Inc. (PRSI) has performed a remediation of the land described herein (Area Immediately Surrounding the Bauxite Pond, SWMU 5). A list of the known constituents, including known concentrations, is attached hereto and is made part of this filing (Exhibit A). Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 30311 files, which are available for inspection upon request at the central office of the Texas Commission on Environmental Quality in Austin.

The Texas Commission on Environmental Quality derives its authority to review the remediation of this tract of land from 361.002 of the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361, which enables the Texas Commission on Environmental Quality to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to 5.012 and 5.013 of the Texas Water Code, Texas Water Code Ann. Chapter 5, the Texas Commission on Environmental Quality is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the Texas Commission on Environmental Quality requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the Texas Commission on Environmental Quality of the suitability of this land for any purpose, nor does it constitute any guarantee by the Texas Commission on Environmental Quality that the remediation standards specified in this certification have been met by PRSI.

II

Being a 0.813-acre (35,432 square feet) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas, said 0.813-acre tract being a portion of a 167.33-acre tract of land conveyed to Pasadena Refining System, Inc., as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County Texas and being more particularly described by metes and bounds as provided in Exhibit B. Exhibit B also provides a sketch of said 0.813-acre tract.

Return to: John Jones
PRSI
111 Red Bluff Rd.
Pasadena, TX
77506

20130314014 Page 1 of 3

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION
(Continued)

Contaminants and waste deposited hereon have been remediated to meet industrial/commercial soil criteria, in accordance with a plan designed to meet the Texas Commission on Environmental Quality 's requirements in 30 Texas Administrative Code §335.555 (Risk Reduction Standard No. 3), which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential. The current or future owner must undertake actions as necessary to protect human health or the environment in accordance with the rules of the Texas Commission on Environmental Quality.

III

The owner of the site is Pasadena Refining System, Inc. and its address is 111 Red Bluff Road, Pasadena, Texas 77506, where more specific information may be obtained from the plant manager.

EXECUTED this the 24th day of June, 2013

VOL

Pasadena Refining System, Inc.

John Edmunds
Operations Director and COO

STATE OF TEXAS
HARRIS COUNTY

BEFORE ME, on this the 24 day of June, personally appeared Mr. John Edmunds, Operations Director and COO, of Pasadena Refining System, Inc., known to me to be the person and agent of said corporation whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 24 day of June, 2013.

Iriva Lyn Sturdivant
Notary Public in and for the State of Texas
County of Harris County

NOTARY PUBLIC STATE OF TEXAS
IRIVA LYN STURDIVANT
My Commission Expires
February 9, 2014

My Commission Expires
2.9.2014

20130350309 pg

Exhibit A: Table of Soil Concentrations

5705-005-500 EX

Priority Group 8
(which includes Buried Cell Near Bauxite Pond, Area Immediately Surrounding Bauxite Pond, and Trap #2 Sump)
Known Constituents and Concentrations in Soils
Pasadena Refining Systems, Inc.

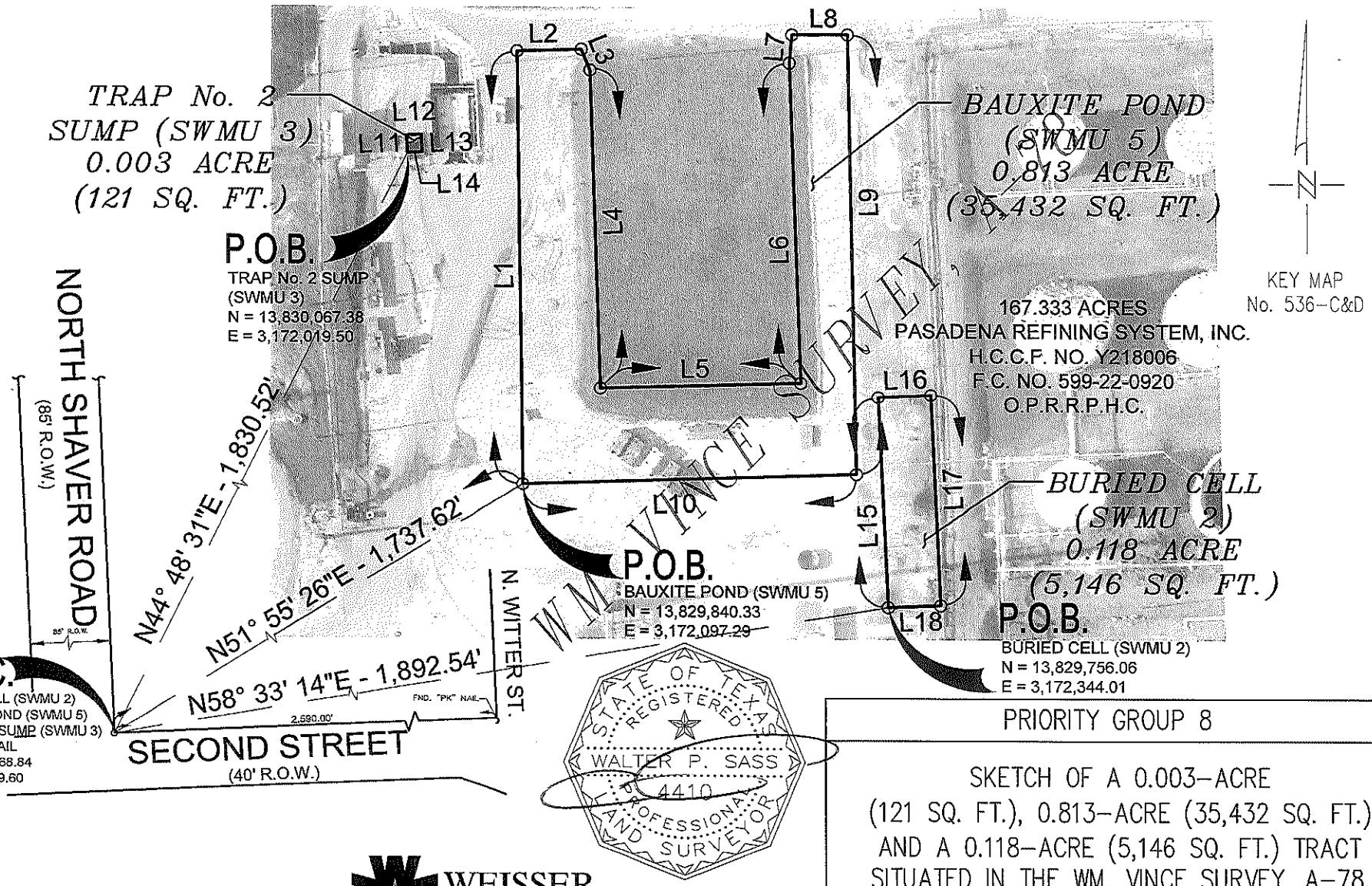
Constituent	Maximum Concentration (mg/Kg)
Total Phenols	16
Barium	760
Cadmium	1.2
Chromium	380
Lead	329
Nickel	40
Zinc	200
Benzene	0.93
Toluene	13
m,p-Xylenes	60
o-Xylenes	26
Benzo(a)anthracene	10
Naphthalene	55

These values are based on sampling efforts conducted in the RCRA Facility Investigation (RFI) program for soils beneath the Solid Waste Management Units, some of which may have been removed or treated or covered with clean backfill material for corrective action in accordance with TCEQ authorization.

Exhibit B: Sketch and Area Metes & Bounds

5783-50-250 45

RP 087-63-0850



STATE OF TEXAS
REGISTERED
WALTER P. SASS
4410
PROFESSIONAL
LAND SURVEYOR

BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE TEXAS SOUTH CENTRAL ZONE No. 4204 STATE PLANE GRID COORDINATES (NAD83)

NOTE:
THIS SURVEY IS BEING CREATED SOLELY FOR THE PARTIES HEREIN STATED; NO LICENSE HAS BEEN CREATED, EXPRESS OR IMPLIED, TO COPY THE SURVEY EXCEPT AS IS NECESSARY IN CONJUNCTION WITH THIS TRANSACTION.

WEISSER
Engineering Co.
19500 Park Row, Suite 100
Houston, Texas 77084
(281) 579 - 7300
T.B.P.E.R. #F-68

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT. ALL ENCUMBRANCES MAY NOT BE SHOWN.
REVISION DATE: 04/11/2013

PRIORITY GROUP 8

SKETCH OF A 0.003-ACRE (121 SQ. FT.), 0.813-ACRE (35,432 SQ. FT.) AND A 0.118-ACRE (5,146 SQ. FT.) TRACT SITUATED IN THE WM. VINCE SURVEY, A-78, HARRIS COUNTY, TEXAS

© Copyright 2013 Weisser Engineering Company, Inc.

DRAWN BY:	L.W.	CALC'D. BY:	J.H.	SCALE:	1" = 100'
F.B. NO:	2841	CHECKED BY:	M.B.	SHEET	01 OF 02
CREW CHIEF:	B.H.	DATE:	5/21/2013	JOB No.:	CT220 (1908-020)

P:\CT220\dwg\CT220_Tract_Bauxite_Pond.dwg, Layout 1, 05/23/13 9:57:55AM, jmicholik

BAUXITE POND
(SWMU 5)

DESCRIPTION OF A 0.813-ACRE (35,432 SQ. FT.)
TRACT OF LAND SITUATED IN
THE WM. VINCE SURVEY, A-78,
HARRIS COUNTY, TEXAS

Being a 0.813-acre (35,432 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas. Said 0.813-acre tract being a portion of a 167.333-acre tract of land conveyed to Pasadena Refining System, Inc. as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County, Texas, and being more particularly described by metes and bounds as follows with the bearings show hereon based on Texas South Central Zone No. 4204 state plane grid coordinates (NAD 83);

COMMENCING at a "PK" nail found for the intersection of the east right-of-way line of North Shaver Road (85 foot wide right-of-way), and the north right-of-way line of Second Street (40 foot wide right-of-way) and for the southwest corner of said 167.333-acre tract, (with a grid coordinate of N = 13,828,768.84, E = 3,170,729.60);

THENCE North 51° 55' 26" East, over and across said 167.333-acre tract, a distance of 1,737.62 feet to the southwest corner and the **POINT OF BEGINNING** of said tract herein described, (with a grid coordinate of N = 13,829,840.33, E = 3,172,097.29);

THENCE North 00° 36' 32" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 297.48 feet to a point for a northwest corner of said tract herein described;

THENCE North 88° 16' 10" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 43.45 feet to a point for a northeast corner of said tract herein described;

THENCE South 22° 54' 02" East, over and across said 167.333-acre tract and with a northeast line of said tract herein described, a distance of 15.30 feet to an angle of said tract herein described;

THENCE South 01° 41' 32" East, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 218.64 feet to a point for an interior angle point of said tract herein described;

THENCE North 88° 22' 44" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 135.14 feet to a point for an interior angle point of said tract herein described;

THENCE North 01° 51' 27" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 220.05 feet to a point for an angle point of said tract herein described;

THENCE North 04° 51' 59" East, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 19.25 feet to a point for the most northwest corner of said tract herein described;

THENCE North 89° 45' 48" East, over and across said 167.333-acre tract and with a north line of said tract herein described, a distance of 37.75 feet to a point for a northeast corner of said tract herein described;

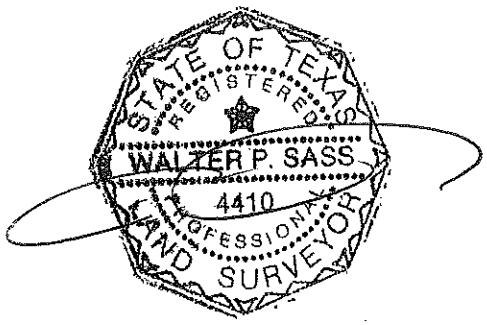
THENCE South 01° 01' 11" East, over and across said 167.333-acre tract and with an east line of said tract herein described, a distance of 301.89 feet to a point for the southeast corner of said tract herein described;

THENCE South 88° 07' 14" West, over and across said 167.333-acre tract and with the south line said tract herein described, a distance of 225.50 feet to the **POINT OF BEGINNING** and containing 0.813 acre (35,432 square feet) of land.

Compiled by:

Weisser Engineering Company
19500 Park Row, Suite 100
Houston, Texas 77084

Job No.: CT220 (1908-020)
Date: 5/21/13



RECORDER'S MEMORANDUM:
At the time of recordation, this instrument was found to be inadequate for the best photographic reproduction because of illegibility, carbon or photo copy, discolored paper, etc. All blockouts, additions and changes were present at the time the instrument was filed and recorded.

20130360762 3 pgs

FILED

2013 JUN 25 PM 1:22

Stan Stanart
COUNTY CLERK
HARRIS COUNTY, TEXAS

ANY PROVISION HEREIN WHICH RESTRICTS THE SALE RENTAL, OR USE OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW.

THE STATE OF TEXAS
COUNTY OF HARRIS

I hereby certify that this instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me; and was duly RECORDED, in the Official Public Records of Real Property of Harris County, Texas

JUN 25 2013

Stan Stanart
COUNTY CLERK
HARRIS COUNTY, TEXAS

7

Notice

M

20130314010
06/25/2013 RP2 $40.00

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Harris County, Texas in compliance with the recordation requirements of said rules:

I

Pasadena Refining System, Inc. (PRSI) has performed a remediation of the land described herein (Dehydrator Tank Firewalls, SWMU 6). A list of the known constituents, including known concentrations in soils, is attached hereto and is made part of this filing (Exhibit A). Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 30311 files, which are available for inspection upon request at the central office of the Texas Commission on Environmental Quality in Austin.

The Texas Commission on Environmental Quality derives its authority to review the remediation of this tract of land from 361.002 of the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361, which enables the Texas Commission on Environmental Quality to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to 5.012 and 5.013 of the Texas Water Code, Texas Water Code Ann. Chapter 5, the Texas Commission on Environmental Quality is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the Texas Commission on Environmental Quality requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the Texas Commission on Environmental Quality of the suitability of this land for any purpose, nor does it constitute any guarantee by the Texas Commission on Environmental Quality that the remediation standards specified in this certification have been met by PRSI.

II

Being a 0.289-acre tract, more or less, out of the Pasadena Refining System Inc. aggregate tract of 167.33 acres, as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County Texas and being more particularly described by metes and bounds provided in Exhibit B. Exhibit B also provides a sketch of said 0.289-acre tract.

Return to: John Jones
PRSI
111 Red Bluff Rd.
Pasadena, Tx
77506

ENGS-9-5-2013

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION
(continued)

Contaminants and waste deposited hereon have been remediated to meet industrial/commercial soil criteria, in accordance with a plan designed to meet the Texas Commission on Environmental Quality 's requirements in 30 Texas Administrative Code §335.555 (Risk Reduction Standard No. 3), which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential. The current or future owner must undertake actions as necessary to protect human health or the environment in accordance with the rules of the Texas Commission on Environmental Quality.

III

The owner of the site is Pasadena Refining System, Inc. and its address is 111 Red Bluff Road, Pasadena, Texas 77506, where more specific information may be obtained from the plant manager.

EXECUTED this the 24th day of June, 2013

Pasadena Refining System, Inc.

John Edmunds
Operations Director and COO

STATE OF TEXAS
HARRIS COUNTY

BEFORE ME, on this the 24 day of June, personally appeared Mr. John Edmunds, Operations Director and COO, of Pasadena Refining System, Inc., known to me to be the person and agent of said corporation whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 24 day of June, 2013.

Iriva Lyn Sturdivant
Notary Public in and for the State of Texas
County of Harris County

IRIVA LYN STURDIVANT
My Commission Expires
February 9, 2014

My Commission Expires
2-9-2014

20130-0503-E25

Exhibit A: Table of Soil Concentrations

Priority Group 1
(which includes Dehydration Tank Firewalls and Maintenance Area Ditch)
Known Constituents and Concentrations in Soils
Pasadena Refining Systems, Inc.

Constituent	Maximum Concentration (mg/Kg)
Total Phenols	5.4
Barium	201
Cadmium	0.4
Chromium	15
Lead	84.1
Nickel	13.7
Zinc	40.2
Benzene	0.31
1,1-Dichloroethane	0.06
Toluene	0.92
1,1,1-Trichloroethane	0.08
Total Xylenes	3.7
Benzo(a)anthracene	6.3
Naphthalene	22

These values are based on sampling efforts conducted in the RCRA Facility Investigation (RFI) program for soils beneath the Solid Waste Management Units, some of which may have been removed or treated or covered with clean backfill material for corrective action in accordance with TCEQ authorization.

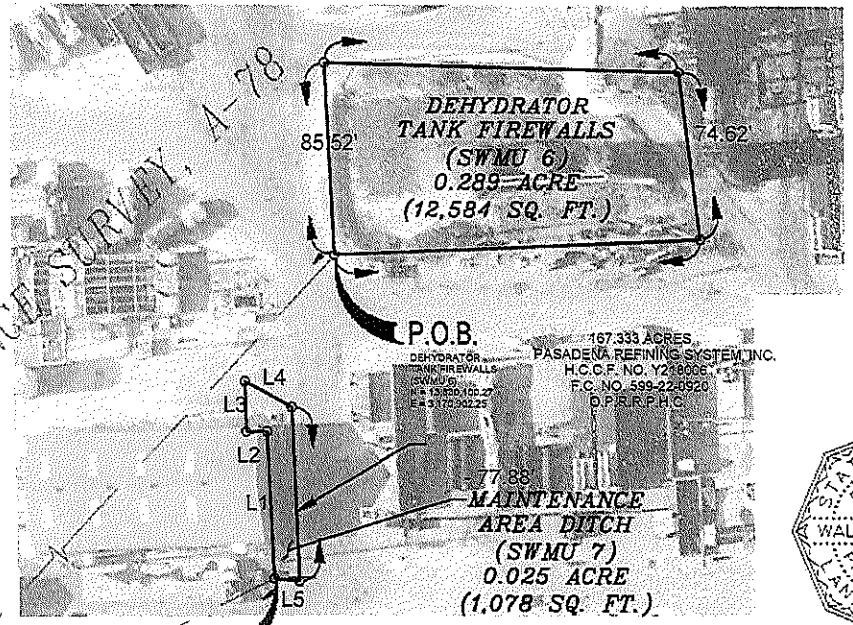
EPA-550-2-88-004

Exhibit B: Sketch and Area Metes & Bounds

2005-05-05 42

P:\CT220\dwg\Dehydrator_Tank_&_Firewalls_Maintenance_Area_Ditch.dwg, Layout: 1, 05/23/13 10:04:02AM, jmichalik

Line Table		
Line #	Length	Direction
L1	65.56'	N02° 36' 32"W
L2	9.09'	S89° 04' 47"W
L3	22.60'	N01° 22' 35"W
L4	23.46'	S60° 52' 03"E
L5	11.12'	N83° 17' 28"W



KEY MAP
No. 536-C&D

E
NORTH
SHAVER
ROAD
O.W

65' R.O.W

P.O.C.
MAINTENANCE AREA DITCH (SWMU 7)
DEHYDRATOR TANK FIREWALLS (SWMU 6)
FND. "PK" NAIL
N = 13,830,766.94
E = 3,170,729.60

P.O.B.
MAINTENANCE AREA DITCH (SWMU 7)
N = 13,829,856.28
E = 3,170,675.20

N. WITTER ST.

FND. "PK" NAIL

2,580.00'
R.O.W

SECOND STREET (40' R.O.W)

STATE OF TEXAS
REGISTERED
WALTER P. SASS
4410
PROFESSIONAL
LAND SURVEYOR

BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE TEXAS SOUTH CENTRAL ZONE No. 4204 STATE PLANE GRID COORDINATES (NAD83)

NOTE:
THIS SURVEY IS BEING CREATED SOLELY FOR THE PARTIES HEREIN STATED; NO LICENSE HAS BEEN CREATED, EXPRESS OR IMPLIED, TO COPY THE SURVEY EXCEPT AS IS NECESSARY IN CONJUNCTION WITH THIS TRANSACTION.

WEISSER
9500 Park Row, Suite 100
Houston, Texas 77084
(281) 579 - 7500
T.B.P.E.S. #F-59

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT. ALL ENCUMBRANCES MAY NOT BE SHOWN.
REVISION DATE: 04/02/2013

PRIORITY GROUP 1

SKETCH OF A 0.025-ACRE (1,078 SQ. FT.) AND A 0.289-ACRE (12,584 SQ. FT.) TRACT SITUATED IN THE WM. VINCE SURVEY, A-78, HARRIS COUNTY, TEXAS

Copyright 2013 Weisser Engineering Company, Inc.

DRAWN BY:	L.W.	CALC'D. BY:	J.H.	SCALE:	1" = 50'
F.B. NO	2541	CHECKED BY:	M.B.	SHEET	01 OF 01
CREW CHIEF:	B.H.	DATE:	5/21/13	JOB No.:	CT220 (1908-020)

9280-69-280 EM

DEHYDRATOR TANK FIREWALLS (SWMU 6)

**DESCRIPTION OF A 0.289-ACRE (12,584 SQ. FT.)
TRACT OF LAND SITUATED IN
THE WM. VINCE SURVEY, A-78,
HARRIS COUNTY, TEXAS**

Being a 0.289-acre (12,584 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas. Said 0.289-acre tract being a portion of a 167.333-acre tract of land conveyed to Pasadena Refining System, Inc. as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County, Texas, and being more particularly described by metes and bounds as follows with the bearings shown hereon based on Texas South Central Zone No. 4204 state plane grid coordinates (NAD 83);

COMMENCING at a "PK" nail found for the intersection of the east right-of-way line of North Shaver Road (85 foot wide right-of-way), and the north right-of-way line of Second Street (40 foot wide right-of-way) and for the southwest corner of said 167.333-acre tract, (with a grid coordinate of N = 13,828,768.84, E = 3,170,729.60);

THENCE North 07° 23' 18" East, over and across said 167.333-acre tract, a distance of 1,342.73 feet to the southwest corner and the **POINT OF BEGINNING** of said tract herein described, (with a grid coordinate of N = 13,830,100.27, E = 3,170,902.25);

THENCE North 02° 49' 18" West, over and across said 167.333-acre tract and with the west line of said tract herein described, a distance of 85.52 feet to a point for the northwest corner of said tract herein described;

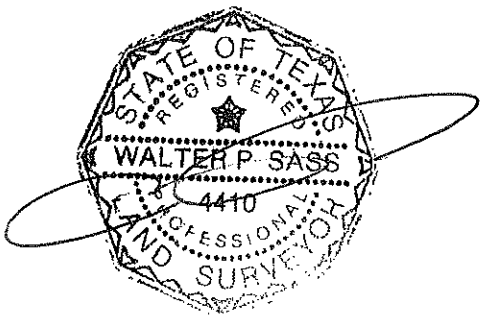
THENCE South 88° 35' 21" East, over and across said 167.333-acre tract and with the north line of said tract herein described, a distance of 155.24 feet to a point for the northeast corner of said tract herein described;

THENCE South 07° 01' 12" East, over and across said 167.333-acre tract and with the east line of said tract herein described, a distance of 74.62 feet to a point for the southeast corner of said tract herein described;

THENCE South 87° 18' 20" West, over and across said 167.333-acre tract and with the south line said tract herein described, a distance of 160.28 feet to the **POINT OF BEGINNING** and containing 0.289 acre (12,584 square feet) of land.

Compiled by:

Weisser Engineering Company
19500 Park Row, Suite 100
Houston, Texas 77084
Job No.: CT220 (1908-020)
Date: 4/2/13



FILED

2013 JUN 25 PM 12:22

Stan Stanart
COUNTY CLERK
HARRIS COUNTY, TEXAS

ANY PROVISION HEREIN WHICH RESTRICTS THE SALE RENTAL, OR USE OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW.
THE STATE OF TEXAS
COUNTY OF HARRIS
I hereby certify that this instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me; and was duly RECORDED, in the Official Public Records of Real Property of Harris County, Texas

JUN 25 2013

Stan Stanart
COUNTY CLERK
HARRIS COUNTY, TEXAS

20130349480

20130314030
06/25/2013 RP2 $44.00

8
Notice
m

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Harris County, Texas in compliance with the recordation requirements of said rules:

I

Pasadena Refining System, Inc. (PRSI) has performed a remediation of the land described herein (Maintenance Area Ditch, SWMU 7). A list of the known constituents, including known concentrations in soils, is attached hereto and is made part of this filing (Exhibit A). Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 30311 files, which are available for inspection upon request at the central office of the Texas Commission on Environmental Quality in Austin.

The Texas Commission on Environmental Quality derives its authority to review the remediation of this tract of land from 361.002 of the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361, which enables the Texas Commission on Environmental Quality to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to 5.012 and 5.013 of the Texas Water Code, Texas Water Code Ann. Chapter 5, the Texas Commission on Environmental Quality is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the Texas Commission on Environmental Quality requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the Texas Commission on Environmental Quality of the suitability of this land for any purpose, nor does it constitute any guarantee by the Texas Commission on Environmental Quality that the remediation standards specified in this certification have been met by PRSI.

II

Being a 0.025-acre tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas. Said 0.025-acre tract being a portion of a 167.33-acre tract of land conveyed to Pasadena Refining System, Inc., as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County Texas and being more particularly described by metes and bounds provided in Exhibit B. Exhibit B also provides a sketch of said 0.025-acre tract.

Return to: John Jones
PRSI
111 Red Bluff Rd.
Pasadena, TX
77506

ENSR-599-0920 PAGE

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION
(Continued)

Contaminants and waste deposited hereon have been remediated to meet industrial/commercial soil criteria, in accordance with a plan designed to meet the Texas Commission on Environmental Quality 's requirements in 30 Texas Administrative Code §335.555 (Risk Reduction Standard No. 3), which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential. The current or future owner must undertake actions as necessary to protect human health or the environment in accordance with the rules of the Texas Commission on Environmental Quality.

III

The owner of the site is Pasadena Refining System, Inc. and its address is 111 Red Bluff Road, Pasadena, Texas 77506, where more specific information may be obtained from the plant manager.

EXECUTED this the 24th day of June, 2013

Pasadena Refining System, Inc.

John Edmunds
Operations Director and COO

STATE OF TEXAS
HARRIS COUNTY

BEFORE ME, on this the 24 day of June, personally appeared Mr. John Edmunds, Operations Director and COO, of Pasadena Refining System , Inc. , known to me to be the person and agent of said corporation whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 24 day of June, 2013.

Iriva Lyn Sturdivant
Notary Public in and for the State of Texas
County of Harris County

IRIVA LYN STURDIVANT
My Commission Expires
February 9, 2014

My Commission Expires
2·9·2014

Exhibit A: Table of Soil Concentrations

5000-950-1000 BH

Priority Group 1
(which includes Dehydration Tank Firewalls and Maintenance Area Ditch)
Known Constituents and Concentrations in Soils
Pasadena Refining Systems, Inc.

Constituent	Maximum Concentration (mg/Kg)
Total Phenols	5.4
Barium	201
Cadmium	0.4
Chromium	15
Lead	84.1
Nickel	13.7
Zinc	40.2
Benzene	0.31
1,1-Dichloroethane	0.06
Toluene	0.92
1,1,1-Trichloroethane	0.08
Total Xylenes	3.7
Benzo(a)anthracene	6.3
Naphthalene	22

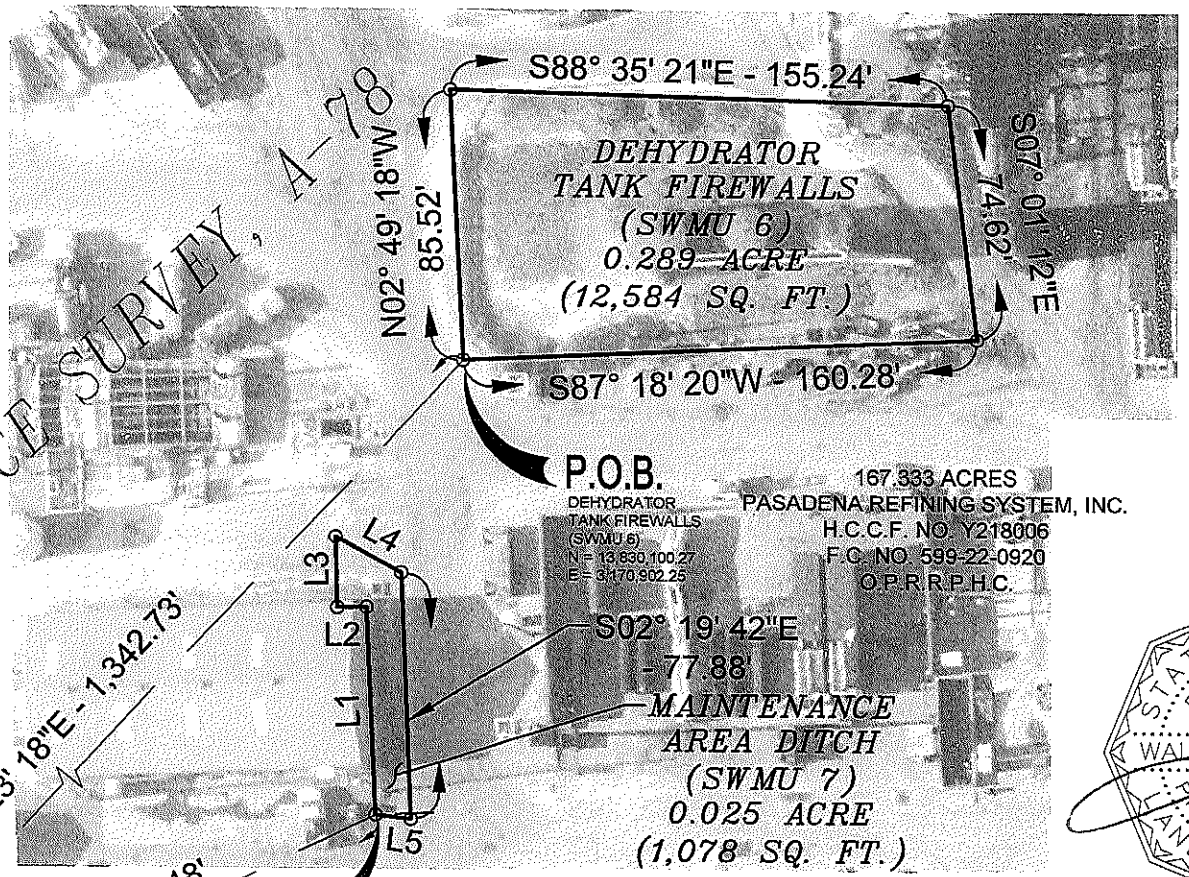
These values are based on sampling efforts conducted in the RCRA Facility Investigation (RFI) program for soils beneath the Solid Waste Management Units, some of which may have been removed or treated or covered with clean backfill material for corrective action in accordance with TCEQ authorization.

NSR No. 1503-PSD

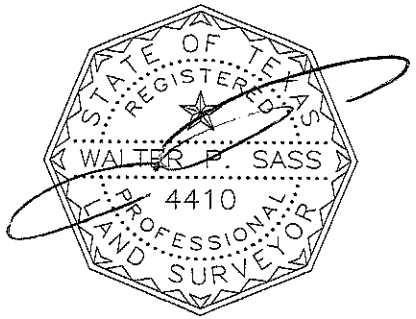
Exhibit B: Sketch and Area Metes & Bounds

2005-050-4 Exh

Line Table		
Line #	Length	Direction
L1	65.56'	N02° 36' 32"W
L2	9.09'	S89° 04' 47"W
L3	22.60'	N01° 22' 35"W
L4	23.46'	S60° 52' 03"E
L5	11.12'	N83° 17' 28"W



KEY MAP
No. 536-C&D



BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE TEXAS SOUTH CENTRAL ZONE No. 4204 STATE PLANE GRID COORDINATES (NAD83)

NOTE:
THIS SURVEY IS BEING CREATED SOLELY FOR THE PARTIES HEREIN STATED; NO LICENSE HAS BEEN CREATED, EXPRESS OR IMPLIED, TO COPY THE SURVEY EXCEPT AS IS NECESSARY IN CONJUNCTION WITH THIS TRANSACTION.

WEISSER Engineering Co.
19500 Park Row, Suite 100
Houston, Texas 77084
(281) 579 - 7300
T.B.P.E.R. #F-68

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT. ALL ENCUMBRANCES MAY NOT BE SHOWN.
REVISION DATE: 04/02/2013

PRIORITY GROUP 1

SKETCH OF A 0.025-ACRE (1,078 SQ. FT.) AND A 0.289-ACRE (12,584 SQ. FT.) TRACT SITUATED IN THE WM. VINCE SURVEY, A-78, HARRIS COUNTY, TEXAS

© Copyright 2013 Weisser Engineering Company, Inc.

DRAWN BY:	L.W.	CALC'D. BY:	J.H.	SCALE:	1" = 50'
F.B. NO:	2841	CHECKED BY:	M.B.	SHEET	01 OF 01
CREW CHIEF:	B.H.	DATE:	5/21/13	JOB No.:	CT220 (1908-020)

MAINTENANCE AREA DITCH (SWMU 7)

**DESCRIPTION OF A 0.025-ACRE (1,078 SQ. FT.)
TRACT OF LAND SITUATED IN
THE WM. VINCE SURVEY, A-78,
HARRIS COUNTY, TEXAS**

Being a 0.025-acre (1,078 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas. Said 0.025-acre tract being a portion of a 167.333-acre tract of land conveyed to Pasadena Refining System, Inc. as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County, Texas, and being more particularly described by metes and bounds as follows with the bearings shown hereon based on Texas South Central Zone No. 4204 state plane grid coordinates (NAD 83);

COMMENCING at a "PK" nail found for the intersection of the east right-of-way line of North Shaver Road (85 foot wide right-of-way), and the north right-of-way line of Second Street (40 foot wide right-of-way) and for the southwest corner of said 167.333-acre tract, (with a grid coordinate of N = 13,828,768.84 E = 3,170,729.60);

THENCE North 06° 59' 26" East, over and across said 167.333-acre tract, a distance of 1,196.48 feet to the southwest corner and the **POINT OF BEGINNING** of said tract herein described, (with a grid coordinate of N = 13,829,956.29 E = 3,170,875.20);

THENCE North 02° 36' 32" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 65.56 feet to a point for an interior corner of said tract herein described;

THENCE South 89° 04' 47" West, over and across said 167.333-acre tract and with a south line of said tract herein described, a distance of 9.09 feet to a point for a southwest corner of said tract herein described;

THENCE North 01° 22' 35" West, over and across said 167.333-acre tract and with a west line of said tract herein described, a distance of 22.60 feet to a point for a northwest corner of said tract herein described;

THENCE South 60° 52' 03" East, over and across said 167.333-acre tract and with the northeast line of said tract herein described, a distance of 23.46 feet to a point for the northeast corner of said tract herein described;

THENCE South 02° 19' 42" East, over and across said 167.333-acre tract and with the east line of said tract herein described, a distance of 77.88 feet to a point for the southeast corner of said tract herein described;

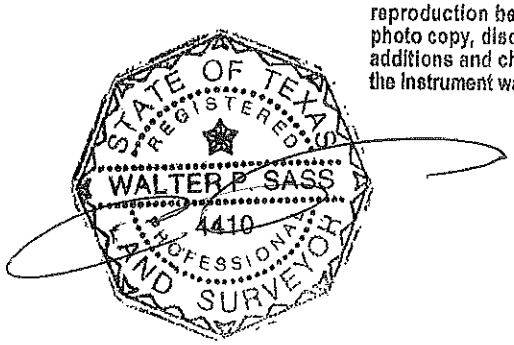
THENCE North 83° 17' 28" West, over and across said 167.333-acre tract, with a south line said tract herein described, a distance of 11.12 feet to the **POINT OF BEGINNING** and containing 0.025 acre (1,078 square feet) of land.

RECORDER'S MEMORANDUM:
At the time of recordation, this instrument was found to be inadequate for the best photographic reproduction because of illegibility, carbon or photo copy, discolored paper, etc. All blockouts, additions and changes were present at the time the instrument was filed and recorded.

Compiled by:

Weisser Engineering Company
19500 Park Row, Suite 100
Houston, Texas 77084

Job No.: CT220 (1908-020)
Date: 5ze /21/13



FILED

2013 JUN 25 PM 1:23

Stan Stanart

COUNTY CLERK
HARRIS COUNTY, TEXAS

ANY PROVISION HEREIN WHICH RESTRICTS THE SALE RENTAL, OR USE OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW.

THE STATE OF TEXAS
COUNTY OF HARRIS

I hereby certify that this instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me; and was duly RECORDED, in the Official Public Records of Real Property of Harris County, Texas

JUN 25 2013

Stan Stanart

COUNTY CLERK
HARRIS COUNTY, TEXAS

20130289365

7

Notice

m

20130314008
06/25/2013 RP2 $40.00

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Harris County, Texas in compliance with the recordation requirements of said rules:

I

Pasadena Refining System, Inc. (PRSI) has performed a remediation of the land described herein (Detol Pad, SWMU 8). A list of the known constituents, including known concentrations, is attached hereto and is made part of this filing (Exhibit A). Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 30311 files, which are available for inspection upon request at the central office of the Texas Commission on Environmental Quality in Austin.

The Texas Commission on Environmental Quality derives its authority to review the remediation of this tract of land from 361.002 of the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361, which enables the Texas Commission on Environmental Quality to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to 5.012 and 5.013 of the Texas Water Code, Texas Water Code Ann. Chapter 5, the Texas Commission on Environmental Quality is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the Texas Commission on Environmental Quality requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the Texas Commission on Environmental Quality of the suitability of this land for any purpose, nor does it constitute any guarantee by the Texas Commission on Environmental Quality that the remediation standards specified in this certification have been met by PRSI.

II

Being a 0.129-acre (5,630 square feet) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas, said 0.129-acre tract being a portion of a 167.33-acre tract of land conveyed to Pasadena Refining System, Inc., as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County Texas and being more particularly described by metes and bounds as provided in Exhibit B. Exhibit B also provides a sketch of said 0.129-acre tract.

Return to: John Jones
PRSI
111 Red Bluff Rd.
Pasadena, TX
77506

5152-5153-5154

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION
(Continued)

Contaminants and waste deposited hereon have been remediated to meet industrial/commercial soil criteria, in accordance with a plan designed to meet the Texas Commission on Environmental Quality 's requirements in 30 Texas Administrative Code §335.555 (Risk Reduction Standard No. 3), which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential. The current or future owner must undertake actions as necessary to protect human health or the environment in accordance with the rules of the Texas Commission on Environmental Quality.

III

The owner of the site is Pasadena Refining System, Inc. and its address is 111 Red Bluff Road, Pasadena, Texas 77506, where more specific information may be obtained from the plant manager.

EXECUTED this the 24th day of June, 2013

LOL

Pasadena Refining System, Inc.

John Edmunds
Operations Director and COO

STATE OF TEXAS
HARRIS COUNTY

BEFORE ME, on this the 24 day of June, personally appeared Mr. John Edmunds, Operations Director and COO, of Pasadena Refining System, Inc. , known to me to be the person and agent of said corporation whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 24 day of June, 2013.

Iriva Lyn Sturdivant
Notary Public in and for the State of Texas
County of Harris County

NOTARY PUBLIC STATE OF TEXAS
IRIVA LYN STURDIVANT
My Commission Expires
February 9, 2014

My Commission Expires
2.9.2014

20130329388 PG

Exhibit A: Table of Soil Concentrations

5F00-69-P00 25

Priority Group 9
(Detol Pad)
Known Constituents and Concentrations in Soils
Pasadena Refining Systems, Inc.

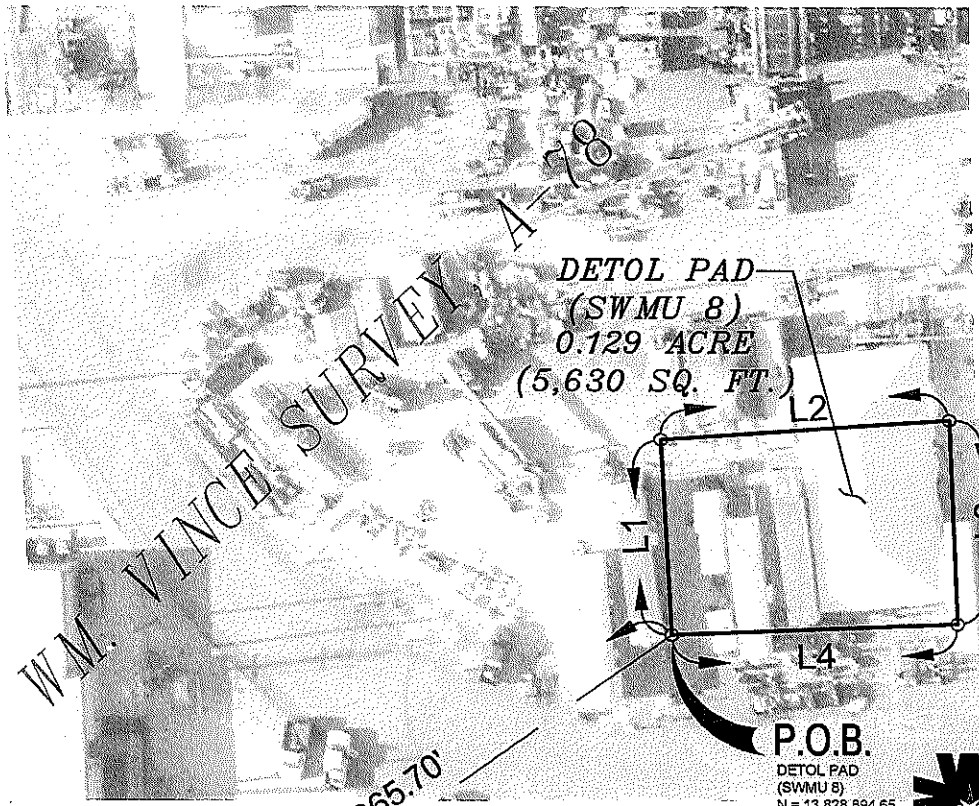
Constituent	Maximum Concentration (mg/Kg)
Total Phenols	6.2
Barium	206
Cadmium	2.2
Chromium	115
Lead	132
Nickel	26.8
Zinc	409
Benzene	0.54
1,1-Dichloroethane	0.08
Toluene	1.69
Total Xylenes	5.77
Benzo(a)anthracene	0.38
Naphthalene	1.9

These values are based on sampling efforts conducted in the RCRA Facility Investigation (RFI) program for soils beneath the Solid Waste Management Units, some of which may have been removed or treated or covered with clean backfill material for corrective action in accordance with TCEQ authorization.

SR05-05-2005 365

Exhibit B: Sketch and Area Metes & Bounds

3E 5-35-5E2-5



Line Table		
Line #	Length	Direction
L1	61.48'	N02° 59' 15"W
L2	90.11'	N85° 55' 35"E
L3	64.16'	S02° 09' 54"E
L4	89.18'	S87° 38' 10"W

KEY MAP
No. 536-C&D

1.667333 ACRES
PASADENA REFINING SYSTEM, INC.
H.C.C.F. NO. Y218006
F.C. NO. 599-22-0920
O.P.R.R.P.H.C.

STATE OF TEXAS
REGISTERED
WALTER P. SASS
4410
PROFESSIONAL
LAND SURVEYOR

WEISSER
Engineering Co.
19500 Park Row, Suite 100
Houston, Texas 77084
(281) 579 - 7300
T.B.P.E.R. #F-68

BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE TEXAS SOUTH CENTRAL ZONE No. 4204 STATE PLANE GRID COORDINATES (NAD83)

NOTE:
THIS SURVEY IS BEING CREATED SOLELY FOR THE PARTIES HEREIN STATED; NO LICENSE HAS BEEN CREATED, EXPRESS OR IMPLIED, TO COPY THE SURVEY EXCEPT AS IS NECESSARY IN CONJUNCTION WITH THIS TRANSACTION.

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT. ALL ENCUMBRANCES MAY NOT BE SHOWN.

REVISION DATE: 04/11/2013

PRIORITY GROUP 9

SKETCH OF A 0.129-ACRE (5,630 SQ. FT.) TRACT SITUATED IN THE WM. VINCE SURVEY, A-78, HARRIS COUNTY, TEXAS

© Copyright 2013 Weisser Engineering Company, Inc.

DRAWN BY:	L.W.	CALC'D. BY:	J.H.	SCALE:	1" = 50'
F.B. NO:	2841	CHECKED BY:	M.B.	SHEET	01 OF 01
CREW CHIEF:	B.H.	DATE:	05/21/2013	JOB No.:	CT220 (1908-020)

P:\CT220\dwg\CT220 0.129 Acre Tract.dwg, Layout 1, 05/23/13 9:56:45AM, jmichalik

DETOL PAD
(SWMU 8)

DESCRIPTION OF A 0.129-ACRE (5,630 SQ. FT.)
TRACT OF LAND SITUATED IN
THE WM. VINCE SURVEY, A-78,
HARRIS COUNTY, TEXAS

Being a 0.129-acre (5,630 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas. Said 0.129-acre tract being a portion of a 167.333-acre tract of land conveyed to Pasadena Refining System, Inc. as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County, Texas, and being more particularly described by metes and bounds as follows with the bearings show hereon based on Texas South Central Zone No. 4204 state plane grid coordinates (NAD 83);

COMMENCING at a "PK" nail found for the intersection of the east right-of-way line of North Shaver Road (85 foot wide right-of-way), and the north right-of-way line of Second Street (40 foot wide right-of-way) and for the southwest corner of said 167.333-acre tract, (with a grid coordinate of N = 13,828,768.84, E = 3,170,729.60);

THENCE North 69° 52' 25" East, over and across said 167.333-acre tract, a distance of 365.70 feet to the southwest corner and the **POINT OF BEGINNING** of said tract herein described, (with a grid coordinate of N = 13,828,894.65, E = 3,171,072.93);

THENCE North 02° 59' 15" West, over and across said 167.333-acre tract and with the west line of said tract herein described, a distance of 61.48 feet to a point for the northwest corner of said tract herein described;

THENCE North 85° 55' 35" East, over and across said 167.333-acre tract and with the north line of said tract herein described, a distance of 90.11 feet to a point for the northeast corner of said tract herein described;

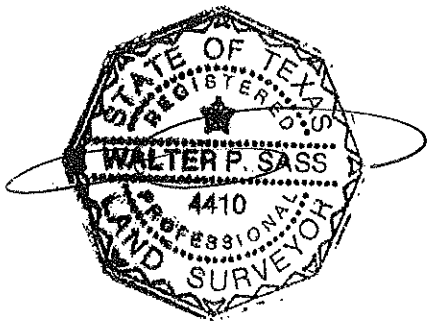
THENCE South 02° 09' 54" East, over and across said 167.333-acre tract and with the east line of said tract herein described, a distance of 64.16 feet to a point for the southeast corner of said tract herein described;

THENCE South 87° 38' 10" West, over and across said 167.333-acre tract and with the south line said tract herein described, a distance of 89.18 feet to the **POINT OF BEGINNING** and containing 0.129 acre (5,630 square feet) of land.

Compiled by:

Weisser Engineering Company
19500 Park Row, Suite 100
Houston, Texas 77084

Job No.: CT220 (1908-020)
Date: 5/21/13



FILED

2013 JUN 25 PM 12:22

Stan Stanart

COUNTY CLERK
HARRIS COUNTY, TEXAS

20130359555

ANY PROVISION HEREIN WHICH RESTRICTS THE SALE RENTAL, OR USE OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW.

THE STATE OF TEXAS
COUNTY OF HARRIS

I hereby certify that this instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me; and was duly RECORDED, in the Official Public Records of Real Property of Harris County, Texas

JUN 25 2013

Stan Stanart
COUNTY CLERK
HARRIS COUNTY, TEXAS

7

20130314028
06/25/2013 RP2 $40.00

Notice

STATE OF TEXAS
HARRIS COUNTY

m

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Harris County, Texas in compliance with the recordation requirements of said rules:

I

Pasadena Refining System, Inc. (PRSI) has performed a remediation of the land described herein (Sandblast Grit Pile, No SWMU Number). A list of the known constituents, including known concentrations, is attached hereto and is made part of this filing (Exhibit A). Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 30311 files, which are available for inspection upon request at the central office of the Texas Commission on Environmental Quality in Austin.

The Texas Commission on Environmental Quality derives its authority to review the remediation of this tract of land from 361.002 of the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361, which enables the Texas Commission on Environmental Quality to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to 5.012 and 5.013 of the Texas Water Code, Texas Water Code Ann. Chapter 5, the Texas Commission on Environmental Quality is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the Texas Commission on Environmental Quality requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the Texas Commission on Environmental Quality of the suitability of this land for any purpose, nor does it constitute any guarantee by the Texas Commission on Environmental Quality that the remediation standards specified in this certification have been met by PRSI.

II

Being a 0.038-acre tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas, said 0.038-acre tract being a portion of a 167.33-acre tract of land conveyed to Pasadena Refining System, Inc., as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County Texas and being more particularly described by metes and bounds as provided in Exhibit B. Exhibit B also provides a sketch of said 0.038-acre tract.

Return to: John Jones
PRSI
111 Red Bluff Rd
Pasadena TX 77506

N 5950-1500 E

STATE OF TEXAS
HARRIS COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION
(Continued)

Contaminants and waste deposited hereon have been remediated to meet industrial/commercial soil criteria, in accordance with a plan designed to meet the Texas Commission on Environmental Quality 's requirements in 30 Texas Administrative Code §335.555 (Risk Reduction Standard No. 3), which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential. The current or future owner must undertake actions as necessary to protect human health or the environment in accordance with the rules of the Texas Commission on Environmental Quality.

III

The owner of the site is Pasadena Refining System, Inc. and its address is 111 Red Bluff Road, Pasadena, Texas 77506, where more specific information may be obtained from the plant manager.

EXECUTED this the 24th day of June, 2013

WL

Pasadena Refining System, Inc

Operations Director and COO

STATE OF TEXAS
HARRIS COUNTY

BEFORE ME, on this the 24 day of June, personally appeared Mr. John Edmunds, Operations Director and COO, of Pasadena Refining System, Inc. , known to me to be the person and agent of said corporation whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 24 day of June, 2013.

Iriva Lyn Sturdivant

Notary Public in and for the State of Texas
County of Harris County

NOTARY PUBLIC STATE OF TEXAS
IRIVA LYN STURDIVANT
My Commission Expires
February 9, 2014

My Commission Expires
2.9.2014

Exhibit A: Table of Soil Concentrations

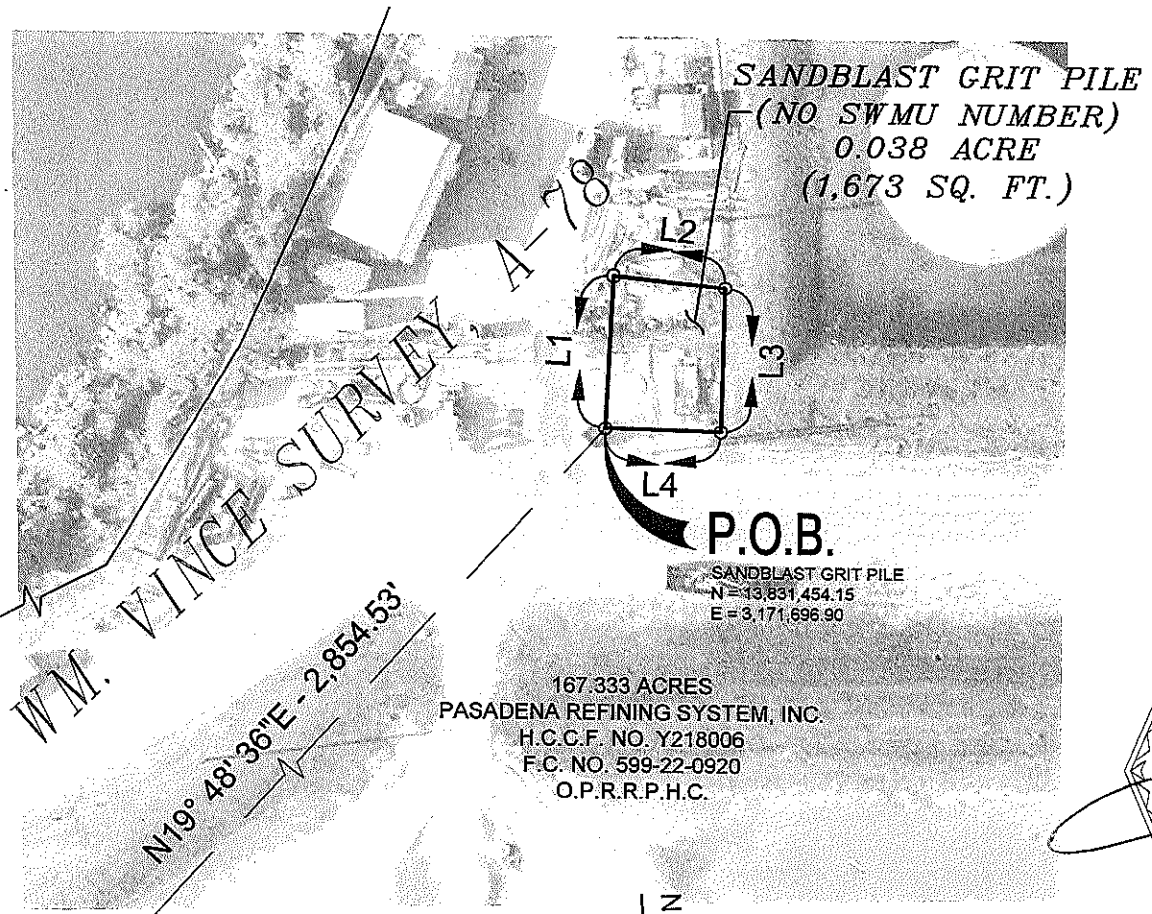
Priority Group 2
(which includes Sandblast Grit Pile and Tank 85 Firewall)
Known Constituents and Concentrations in Soils
Pasadena Refining Systems, Inc.

Constituent	Maximum Concentration (mg/Kg)
Total Phenols	24.4
Arsenic	4.03
Barium	197
Chromium	110
Lead	992
Nickel	13.8
Zinc	13.8
Benzene	0.152
Ethylbenzene	0.0102
Toluene	0.21
Total Xylenes	1.38
Benzo(a)anthracene	0.01
Naphthalene	0.0067

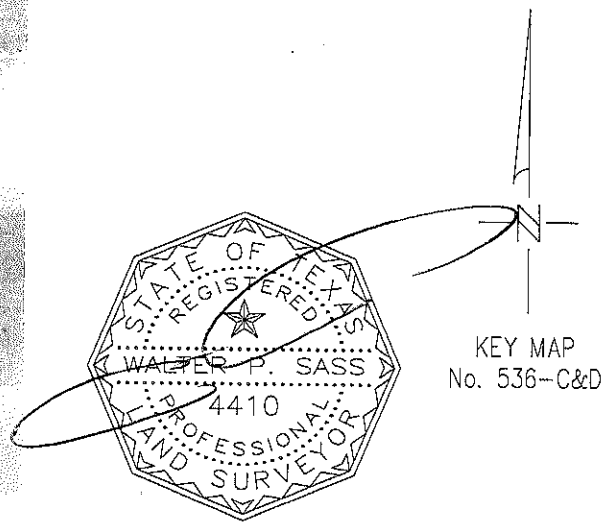
.These values are based on sampling efforts conducted in the RCRA Facility Investigation (RFI) program for soils beneath the Solid Waste Management Units, some of which may have been removed or treated or covered with clean backfill material for corrective action in accordance with TCEQ authorization.

Exhibit B: Sketch and Area Metes & Bounds

5150-5160 Bel



Line Table		
Line #	Length	Direction
L1	48.52'	N02° 45' 17"E
L2	34.96'	S84° 10' 14"E
L3	45.82'	S01° 20' 53"W
L4	36.05'	N88° 34' 21"W



BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE TEXAS SOUTH CENTRAL ZONE No. 4204 STATE PLANE GRID COORDINATES (NAD83)

NOTE:
THIS SURVEY IS BEING CREATED SOLELY FOR THE PARTIES HEREIN STATED; NO LICENSE HAS BEEN CREATED, EXPRESS OR IMPLIED, TO COPY THE SURVEY EXCEPT AS IS NECESSARY IN CONJUNCTION WITH THIS TRANSACTION.

WEISSER Engineering Co.
19500 Park Row, Suite 100
Houston, Texas 77084
(281) 579 - 7300
T.B.P.E.R. #F-68

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT. ALL ENCUMBRANCES MAY NOT BE SHOWN.
REVISION DATE: 04/02/2013

PRIORITY GROUP 2

SKETCH OF A 0.038-ACRE (1,673 SQ. FT.) TRACT SITUATED IN THE WM. VINCE SURVEY, A-78, HARRIS COUNTY, TEXAS

© Copyright 2013 Weisser Engineering Company, Inc.

DRAWN BY:	L.W.	CALC'D. BY:	J.H.	SCALE:	1" = 50'
F.B. NO:	2841	CHECKED BY:	M.B.	SHEET	01 OF 01
CREW CHIEF:	B.H.	DATE:	5/21/2013	JOB No.:	CT220 (1908-020)

SANDBLAST GRIT PILE

RECORDER'S MEMORANDUM:
At the time of recordation, this instrument was found to be inadequate for the best photographic reproduction because of illegibility, carbon or photo copy, discolored paper, etc. All blockouts, additions and changes were present at the time the instrument was filed and recorded.

DESCRIPTION OF A 0.038-ACRE (1,673 SQ. FT.) TRACT OF LAND SITUATED IN THE WM. VINCE SURVEY, A-78, HARRIS COUNTY, TEXAS

Being a 0.038-acre (1,673 square foot) tract of land situated in the WM. Vince Survey, A-78, Harris County, Texas. Said 0.038-acre tract being a portion of a 167.333-acre tract of land conveyed to Pasadena Refining System, Inc. as recorded under Harris County Clerk's File Number Y218006, Film Code Number 599-22-0920 of the Official Public Records of Real Property, Harris County, Texas, and being more particularly described by metes and bounds as follows with the bearings shown hereon based on Texas South Central Zone No. 4204 state plane grid coordinates (NAD 83);

COMMENCING at a "PK" nail found for the intersection of the east right-of-way line of North Shaver Road (85 foot wide right-of-way), and the north right-of-way line of Second Street (40 foot wide right-of-way) and for the southwest corner of said 167.333-acre tract, (with a grid coordinate of N = 13,828,768.84, E = 3,170,729.60);

THENCE North 19° 48' 36" East, over and across said 167.333-acre tract, a distance of 2,854.53 feet to the southwest corner and the **POINT OF BEGINNING** of said tract herein described, (with a grid coordinate of N = 13,831,454.15, E = 3,171,696.90);

THENCE North 02° 45' 17" East, over and across said 167.333-acre tract and with the west line of said tract herein described, a distance of 48.52 feet to a point for the northwest corner of said tract herein described;

THENCE South 84° 10' 14" East, over and across said 167.333-acre tract and with the north line of said tract herein described, a distance of 34.96 feet to a point for the northeast corner of said tract herein described;

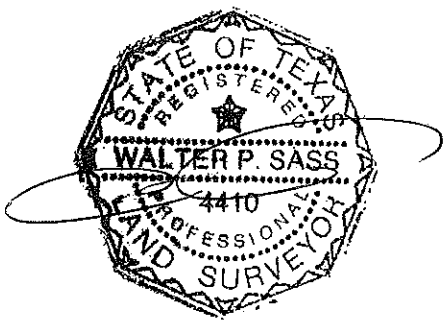
THENCE South 01° 20' 53" West, over and across said 167.333-acre tract and with the east line of said tract herein described, a distance of 45.82 feet to a point for the southeast corner of said tract herein described;

THENCE North 88° 34' 21" West, over and across said 167.333-acre tract and with the south line said tract herein described, a distance of 36.05 feet to the **POINT OF BEGINNING** and containing 0.038 acre (1,673 square feet) of land.

Compiled by:

Weisser Engineering Company
19500 Park Row, Suite 100
Houston, Texas 77084

Job No.: CT220 (1908-020)
Date: 5/21/13



RP-2013-150408

FILED

2013 JUN 25 PM 1:23

Stan Stanart

COUNTY CLERK
HARRIS COUNTY, TEXAS

20130359200 45

ANY PROVISION HEREIN WHICH RESTRICTS THE SALE RENTAL, OR USE OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW.

THE STATE OF TEXAS
COUNTY OF HARRIS

I hereby certify that this instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me; and was duly RECORDED, in the Official Public Records of Real Property of Harris County, Texas

JUN 25 2013

Stan Stanart

COUNTY CLERK
HARRIS COUNTY, TEXAS

Attachment C
Revised Tables

Redline Tables

CP Table II: Solid Waste Management Units and/or Areas of Concern Addressed in Permit Section XI.H. for which Corrective Action Applies Pursuant to 30 TAC Section 335.167

Unit Name	NOR Number, if applicable	SWMU or AOC	Affected Media[1]	Date Program Requirement and Remedy Standard Completed
Refinery: Tank Fire Walls (consisting of 33 tanks: 1, 2, 47 (removed), 50, 51, 85, 97, 202, 203, 204, 206, 314 to 317, 319 to 327, 330 (formerly 207), 331, 332, 348, 811, 820, and 824 to 826)		SWMU 1	GW and Soil	NFA approved for soils July 26, 2013; Risk Reduction Rule Standard 3 (RRR3)
Refinery: Buried Cell Near the Bauxite Pond		SWMU 2	Soil	NFA approved July 26, 2013; RRR3
Refinery: Trap No. 2 Sump	015	SWMU 3	Soil	NFA approved ~~09/07/2006~~July 26, 2013; RRR3
Refinery: Waste Pile Containing Coke at Gate 14	005	SWMU 4	Soil	NFA approved July 26, 2013~~09/07/2006~~; RRR3
Refinery: Area Immediately Surrounding the Bauxite Pond		SWMU 5	Soil	NFA approved July 26, 2013~~09/07/2006~~; RRR3
Refinery: Dehydrator Tank Fire Walls		SWMU 6	Soil	NFA approved July 26, 2013; RRR3
Refinery: Maintenance Area Ditch		SWMU 7	Soil	NFA approved July 26, 2013; RRR3
Refinery: Detol Pad		SWMU 8	Soil	NFA approved July 26, 2013; RRR3
Refinery: Sandblast Grit Pile		SWMU 9	Soil	NFA approved July 26, 2013~~09/07/2006~~; RRR3
Refinery: Groundwater Region 7 PMZ		AOC 10	GW	
Refinery: Site-Wide PMZ (Groundwater Regions 1, 2, 3, 4, 5, and 6)		AOC 11	GW	
Refinery: Tanks 203 and 204		SWMU 12	GW and soil	

Refinery: Tank 97	013	SWMU 13	GW and soil	
RBTF: Tank 830		SWMU 14	Pending	
Refinery: Tank 307		SWMU 15	Pending	
WP: Salvage Yard Piles	319/424	SWMU 16	Soil	
WP: Abandoned Cooling Tower Basin	427	SWMU 17	Pending	
WP: Storage Area for Asbestos Containing Materials	324/402	SWMU 18	Soil	
WP: Incinerator	417	SWMU 19	GW and Soil	
WP: Waste Piles Near Paint Shop	320/426	SWMU 20	GW and Soil	
WP: West Property Groundwater PMZ	320/414/417/426	AOC 21	GW	
WP: Paint Storage Room	414	SWMU 22	GW and Soil	
RBTF: Storm Water System		SWMU 23	Pending	
RBTF: Historical Tank Footprint		AOC 24	Pending	
RBTF: Aboveground Piping		AOC 25	Pending	
RBTF: Former Truck Loading Terminal		AOC 26	Pending	
RBTF: City of Pasadena Laydown Storage Yard		AOC 27	Pending	
WP: Aboveground Tanks and Surface Conveyance Feature		AOC 28	Pending	
WP: Former Roof Shingle Production Area		AOC 29	Pending	
SP: Fuel Storage Tanks		AOC 30	Pending	
SP: Former Concrete Batch Plant Equipment		AOC 31	Pending	
SP: Former Pond 1		AOC 32	Pending	
SP: Former Pond 2		AOC 33	Pending	
SP: Former Pond 3		AOC 34	Pending	

SP: Equipment Washdown Pad and Sump		AOC 35	Pending	

Refinery = SWMU or AOC located on Main Refinery

RBTF = SWMU or AOC located on Red Bluff Tank Farm

WP = SWMU or AOC located on West Property

SP = SWMU or AOC located on South Property

SWMU= Solid Waste Management Unit

AOC= Area of Concern

Foot Note:

1. Specify the affected media [i.e. soil, groundwater (GW), surface water (SW), sediment (SED)].
2. For each SWMU or AOC, specify the Remedy Standard that was completed and the date of the Commission's No Further Action (NFA) letter for the media of concern.
3. For sites with FOA authorization, list the SWMUs and/or AOCs that are subject to corrective action at the site. Please separate the SWMUs and/or AOCs that are located within the FOA boundary from the SWMUs and/or AOCs that are located outside of the FOA boundary.

Note:

CP Table II lists SWMUs and/or AOCs which have been identified in the RCRA Facility Assessment (RFA) Report as having a release(s) or a potential release(s) of hazardous waste, hazardous constituents, or other constituents of concern. The permittee is thus required to meet Corrective Action Objectives for the SWMUs and/or AOCs in accordance with Permit Section XI.H. and 30 TAC Section 335.167.

The permittee shall update CP Table II when a new SWMU and/or AOC that requires corrective action is identified. The permittee shall also update CP Table II as outlined in Footnote 2 when the corrective action status of a media for a SWMU or AOC has changed.

SWMUs and/or AOCs shall not be deleted from this table when the Corrective Action Objectives have been completed and a No Further Action (NFA) determination has been approved for the SWMU and/or AOC. In accordance with Permit Section XI.H., CP Table II is intended to be a historical record of the facility's corrective actions and to reflect when the Corrective Action Objectives have been met for each SWMU/AOC.

There may be cases in which the permittee fulfills the Corrective Action Objectives for soils at a SWMU/AOC, but long-term groundwater monitoring and corrective action may be necessary to meet the groundwater Corrective Action Objectives. In such instances, the SWMU/AOC would be listed in CP Table I, Item C, and would be subject to all applicable provisions of this Compliance Plan. If a release from a SWMU/AOC is commingled with a RCRA-regulated unit, then the unit and the SWMU/AOC would be listed in CP Table I, Item D. In accordance with Permit Section XI.H., once the Corrective Action Objectives for groundwater are completed, the permittee shall modify or amend the Compliance Plan to reassign the SWMU/AOC in CP Table I, Item C or Item D, to CP Table II. CP Table II should reflect the new status of the SWMU/AOC. It should include the Remedy Standard achieved for all media of concern and the date of the Commission's NFA approval letter for each SWMU/AOC.

Permittee: Pasadena Refining System, Inc.

CP Table III: Corrective Action Program Table of Detected Hazardous and Solid Waste Constituents and the Groundwater Protection Standard

Unit Name	**Column A** Hazardous Constituents	**Column B** Groundwater Protection Standards (mg/l) at the POC[2]		**Column C** Groundwater Protection Standards (mg/l) at the POE or APOE, or FBOC[1,2]	
Ponds WMA	Benzene	0.588	^{SW}GW		N/A
	o-Cresol	60	^{SW}GW		N/A
	m- and p-Cresol	60	^{SW}GW		N/A
	2,4-Dimethylphenol	9.41	^{SW}GW		N/A
	Ethylbenzene	29.3	^{SW}GW		N/A
	2-Methylnaphthalene	3.53	^{SW}GW		N/A
	Naphthalene	14.7	^{SW}GW		N/A
	Phenol	324	^{SW}GW		N/A
	Toluene	56.5	^{SW}GW		N/A
	Xylenes	100	^{SW}GW		N/A
	1,2-Dichloroethane	4.3	$^{Air}GW_{Inh\text{-}V}$		N/A
	Chloroethane	9.8	$^{GW}GW_{ING}$		N/A
	Vinyl Chloride	0.002	$^{GW}GW_{ING}$		N/A
	Benzo(a) pyrene	0.01	^{SW}GW		N/A
	Chrysene	0.01	^{SW}GW		N/A
	Lead	0.624	^{SW}GW		N/A
	Chromium	5.84	^{SW}GW		N/A
Refinery: Site-Wide PMZ (Groundwater Regions 1, 2, 3, 4, 5, & 6)	Benzene	0.588	^{SW}GW	0.588	^{SW}GW
	Benzo(a)anthracene	0.01	^{SW}GW	0.01	^{SW}GW
	Bis(2-ethylhexyl)phthalate	2.59	^{SW}GW	2.59	^{SW}GW
	1,2-Dichloroethane	4.30	^{SW}GW	4.30	^{SW}GW
	Ethylbenzene	29.3	^{SW}GW	29.3	^{SW}GW
	Methyl t-butyl ether (MTBE)	28.2	^{SW}GW	28.2	^{SW}GW
	2-Methylnaphthalene	3.53	^{SW}GW	3.53	^{SW}GW
	Naphthalene	14.7	^{SW}GW	14.7	^{SW}GW
	Toluene	56.5	^{SW}GW	56.5	^{SW}GW
	Xylenes	100	^{SW}GW	100	^{SW}GW

Permittee: Pasadena Refining System, Inc.

Unit Name	**Column A** Hazardous Constituents	**Column B** Groundwater Protection Standards (mg/l) at the POC[2]		**Column C** Groundwater Protection Standards (mg/l) at the POE or APOE, or FBOC[1,2]	
	Arsenic	0.165	^{SW}GW	0.165	^{SW}GW
	Chromium	5.84	^{SW}GW	5.84	^{SW}GW
	Lead	0.624	^{SW}GW	0.624	^{SW}GW
	Vanadium	10.6	^{SW}GW	10.6	^{SW}GW
Refinery: Groundwater Region 7 PMZ	Benzene	0.005	^{GW}GW$_{ING}$	0.005	^{GW}GW$_{ING}$
	Benzo(a)anthracene	0.0091	^{GW}GW$_{ING}$	0.0091	^{GW}GW$_{ING}$
	o-Cresol	1.2	^{GW}GW$_{ING}$	1.2	^{GW}GW$_{ING}$
	m- and p-Cresol	0.12	^{GW}GW$_{ING}$	0.12	^{GW}GW$_{ING}$
	1,2-Dichloroethane	0.005	^{GW}GW$_{ING}$	0.005	^{GW}GW$_{ING}$
	Diethylphthalate	20	^{GW}GW$_{ING}$	20	^{GW}GW$_{ING}$
	2,4-Dimethylphenol	0.49	^{GW}GW$_{ING}$	0.49	^{GW}GW$_{ING}$
	Ethylbenzene	0.7	^{GW}GW$_{ING}$	0.7	^{GW}GW$_{ING}$
	Methyl Ethyl Ketone (2-Butanone)	15	^{GW}GW$_{ING}$	15	^{GW}GW$_{ING}$
	2-Methylnaphthalene	0.098	^{GW}GW$_{ING}$	0.098	^{GW}GW$_{ING}$
	Naphthalene	0.49	^{GW}GW$_{ING}$	0.49	^{GW}GW$_{ING}$
	Toluene	1	^{GW}GW$_{ING}$	1	^{GW}GW$_{ING}$
	Xylenes	10	^{GW}GW$_{ING}$	10	^{GW}GW$_{ING}$
	Arsenic	0.01	^{GW}GW$_{ING}$	0.01	^{GW}GW$_{ING}$
	Barium	2	^{GW}GW$_{ING}$	2	^{GW}GW$_{ING}$
	Chromium	0.1	^{GW}GW$_{ING}$	0.1	^{GW}GW$_{ING}$
	Lead	0.015	^{GW}GW$_{ING}$	0.015	^{GW}GW$_{ING}$
	Nickel	0.49	^{GW}GW$_{ING}$	0.49	^{GW}GW$_{ING}$
	Vanadium	0.044	^{GW}GW$_{ING}$	0.044	^{GW}GW$_{ING}$
	Zinc	7.3	^{GW}GW$_{ING}$	7.3	^{GW}GW$_{ING}$
WP: West Property Groundwater PMZ	Benzene	0.005	^{GW}GW$_{ING}$	0.005	^{GW}GW$_{ING}$
	Pentachlorophenol	0.001	^{GW}GW$_{ING}$	0.001	^{GW}GW$_{ING}$
	Tetrachloroethene	0.005	^{GW}GW$_{ING}$	0.005	^{GW}GW$_{ING}$
	Trichloroethene	0.005	^{GW}GW$_{ING}$	0.005	^{GW}GW$_{ING}$
	1,1-Dichloroethene	0.007	^{GW}GW$_{ING}$	0.007	^{GW}GW$_{ING}$

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Unit Name	**Column A** Hazardous Constituents	**Column B** Groundwater Protection Standards (mg/l) at the POC[2]		**Column C** Groundwater Protection Standards (mg/l) at the POE or APOE, or FBOC[1,2]	
	cis-1,2-Dichloroethene	0.07	$^{GW}GW_{ING}$	0.07	$^{GW}GW_{ING}$
	trans-1,2-Dichloroethene	0.1	$^{GW}GW_{ING}$	0.1	$^{GW}GW_{ING}$
	Vinyl Chloride	0.002	$^{GW}GW_{ING}$	0.002	$^{GW}GW_{ING}$
	Dioxin/Furan (as 2,3,7,8-TCDDD toxicity equivalent quotients)	3×10^{-8} TEQ	$^{GW}GW_{ING}$	3×10^{-8} TEQ	$^{GW}GW_{ING}$
	Arsenic	0.01	$^{GW}GW_{ING}$	0.01	$^{GW}GW_{ING}$
	Polychlorinated Biphenyls	0.0005	$^{GW}GW_{ING}$	0.0005	$^{GW}GW_{ING}$
	Lead	0.015	$^{GW}GW_{ING}$	0.015	$^{GW}GW_{ING}$

Notes:

a) If the Corrective Action Program (Provision XI.E.) does not apply to the RCRA-regulated units, SWMUs, or AOCs at the facility, mark "Reserved" next to the CP Table III heading.

b) CP Table III represents the long list of hazardous constituents that are reasonably expected to be in, or derived from, the waste placed in each RCRA-regulated unit, SWMU, and/or AOC listed in the table. CP Table III also lists the hazardous constituents that have been historically detected in the groundwater for each RCRA-regulated unit, SWMU, and/or AOC. These hazardous constituents are monitored in accordance with Provision XI.F.3.c.(1).

c) In accordance with Provision XI.D.6., the Groundwater Protection Standards (GWPS) must be met before the RCRA-regulated unit, SWMU, and/or AOC can exit the Corrective Action Program.

d) If applicable, "Appendix IX" can be used in Column A for a unit instead of listing each chemical of concern (COC). The permittee may petition the Executive Director for the deletion of a specific COC from the Appendix IX analysis if the permittee can demonstrate that the COC was never used in the facility's operations nor was disposed of in the waste management area.

e) Attenuation monitoring point (AMP) wells, corrective action system (CAS) wells, and corrective action observation (CAO) wells should not be listed in CP Table III. These wells should only be depicted in the CP Attachment A maps. Once an AMP, CAS, or CAO well meets its respective attenuation action levels (AALs) or GWPS, then the Permittee may propose to discontinue monitoring that well without modification to the Permit. If the AMP, CAS, or CAO well is listed in CP Table III, then any proposed change to the well would require modification to the Permit. Changes to the wells depicted in the CP Attachment A maps can be approved in the Groundwater Monitoring Report required by CP Table VII and become a part of the Permit by reference.

Footnotes:

1. Use Column C to specify the GWPS assigned at a POE or APOE (i.e. for sites with MNA or PMZ proposals as applicable under TRRP), or FBOC for those sites with FOA authorization. Put "N/A" if a specific program or column item is not applicable.
2. For each COC, select the appropriate GWPS designation and definition to demonstrate that the corrective action program objectives are being achieved either under the Risk Reduction Rules (RRR) pursuant to 30 TAC Chapter 335 or the Texas Risk Reduction Program (TRRP) pursuant to 30 TAC Chapter 350. The RRR and TRRP GWPS designations and definitions may not be combined pursuant to 30 TAC Section 350.2(m).

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TRRP GWPS Designations and Definitions

$^{GW}GW_{Ing}$	ACL pursuant to 30 TAC §335.160(b) based upon the PCL determined under RSA or RSB (Residential or Commercial /Industrial) for Class 1 or Class 2 Groundwater ingestion PCL of 30 TAC Chapter 350. The PCL value, Column B, will change as updates to the rule are promulgated. Changes to the rule automatically change the concentration value established in Column B in this table.. In accordance with §350.72(b), GWGWIng, PCLs may need to be adjusted to lower concentrations to meet the cumulative carcinogenic risk level (less than or equal to 1x10-4) and hazard index criteria (less than or equal to 10) when there are more than 10 carcinogenic and/or more than 10 non-carcinogenic chemicals of concern within a source medium.
MCL	ACL pursuant to 30 TAC §335.160(b) based upon the Protective PCL determined under RSA or RSB for Groundwater- to-surface water PCL of 30 TAC Chapter 350. The PCL value, Column B, will change as updates to the rule are promulgated. Changes to the rule automatically change the concentration value established in Column B in this table.

CP Table VI: Compliance Period for RCRA-Regulated Units

Moat (NOR 001)	Year or Number of Years
Year Waste Management Activities Initiated	1979
Year Closed	1991
Compliance Period (years)	12 years[1]
Compliance Period Began	2007
Stormwater Pond	Year or Number of Years
Year Waste Management Activities Initiated	1973
Year Closed	1992
Compliance Period (years)	19 years[1]
Compliance Period Began	1998
Bauxite Pond	Year of Number of Years
Year Waste Management Activities Initiated	1947
Year Closed	1992
Compliance Period (years)	45 years
Compliance Period Began	1998

[1]The initial compliance period has been achieved, but groundwater monitoring is still ongoing.

CP Table VIII: Compliance Schedule

Item	**Compliance Schedule** (from the date of issuance of the Compliance Plan unless otherwise specified)	**Regulatory Citation**	**Requirement**
A.	60 days	Compliance Plan	Submit to the Executive Director a schedule summarizing all activities required by the Compliance Plan. The schedule shall list the starting dates of all routine activities. The permittee shall include an updated schedule in the groundwater monitoring report required by Provision XI.G.3. and CP Table VII. The schedule shall list the activity or report, the Compliance Plan Section which requires the activity or report, and the calendar date the activity or report is to be completed or submitted (if this date can be determined.)
B.	Requirement completed on 10/26/2010	30 TAC §335.163(4) and Provision XI.F.2.	Submit to the Executive Director for review and approval a Sampling & Analysis Plan (SAP) unless the SAP has been submitted with the application and referenced in Provision I.B.
C.	During the first thirty (30) days of each first and third quarter	30 TAC §335.166	Corrective Action monitoring shall be conducted on a semiannual basis for the RCRA-regulated units listed in CP Table I.A. which are subject to the Corrective Action Program.
D.	During the first thirty (30) days of each first quarter	30 TAC §335.165	Compliance Monitoring shall be conducted on an annual basis for the RCRA-regulated units listed in CP Table I.B. which are subject to the Compliance Monitoring Program.
E.	During the first thirty (30) days of each first and third quarter	30 TAC §335.167	Corrective Action monitoring shall be conducted on a semiannual basis for the solid waste management units (SWMUs) and/or areas of concern (AOCs) listed in CP Table I.C. which are subject to the Corrective Action Program.

Item	Compliance Schedule (from the date of issuance of the Compliance Plan unless otherwise specified)	Regulatory Citation	Requirement
F.	During the first thirty (30) days of each first and third quarter	30 TAC §335.151	Alternative Corrective Action monitoring shall be conducted on a semiannual basis for the RCRA-regulated units, SWMUs, and/or AOCs listed in CP Table I.D. which are subject to the Corrective Action Program.
G.	Not Applicable	30 TAC Section 335.156 and Chapter 350	FOA Corrective Action monitoring shall be conducted on a semiannual basis for the RCRA-regulated units, SWMUs, and/or AOCs listed in CP Table I.E., which are located within the FOA Boundary and are subject to the Corrective Action Program.
H.	Requirement completed on 10/16/2012 (West Property PMZ) 7/30/2015 (Site-Wide PMZ, Groundwater Region 7 PMZ)	30 TAC §350.31(g) and §350.33(f) (4)(C)(i)	If a plume management zone (PMZ) has been authorized, submit to the Executive Director proof of compliance with the institutional control requirements which provides notice of the existence and location of the PMZ and which prevents exposure to groundwater from this zone until such a time when the concentrations of the chemicals of concern are less than the groundwater protection standards (GWPS) listed on CP Table III.
I.	Notify within 30 days	30 TAC §350.33(k)	If a PMZ has been authorized, after an unexpected event occurs which indicates that additional response actions will be required at an affected property.

Notes:

1. Please note that Corrective Action monitoring is conducted on semiannual basis unless a less frequent monitoring schedule is approved based on plume stability and achievement of Corrective Action objectives.

Table XI.A.1. - Facility History for Waste Management Units

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Moat*	Surface Impoundment	001	1/1/1979	D002, D003, D007, D018, D026, D028 F037, K049, K050, K169	3.2 acres	Unknown	12/31/1989	1/1/1991	4/9/1991	Yes
Refinery: Stormwater Pond*	Surface Impoundment	002	1/1/1973	D002, D003, D008, D018, D026, D028, F037, K049, K050, K052	4.9 acres	Unknown	prior to May 1990	6/30/1992		Yes
Refinery: Barrel Storage Yard*	Container Storage Area	004	1/1/1981	D001, D008, U077	188 drums	0	1/1/1994	10/6/1994	10/6/1994	No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Bauxite Pond*	Surface Impoundment	007	1/1/1920	D002, D018, K050	0.7 acres	Unknown	12/31/1988	1/1/1990	3/20/1992	Yes
Refinery: Waste Pile Containing Coke at Gate 14	Land Application (SWMU 4)	005	1/1/1978	-	1800 cy	N/A	N/A	2013		No
Refinery: Road Fill	Landspreading Area	008	N/A	-	108,440 cy	N/A	N/A			No
Refinery: Tank	Tank (Aboveground)	009	Unknown	-	18,700 gallons	0	Prior to 1990	1995		No
Refinery: Storage Bin*	Misc. Storage Container	010	1989	D001, D007, D008, D018, D023, D024, D025, F037, K049, K050, K052, K169, K171	450 cy	N/A	N/A			No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Storage Bin	Misc. Storage Container	011	1989	-	15 cy	0	1995			No
Refinery: Storage Bin*	Misc. Storage Container	012	1989	F037	15 cy	0	1995			No
Refinery: Tank 97*	Tank (Aboveground; SWMU 13)	013	Unknown	D001, D003, D018, D028 F037	3,864,000 gallons	N/A	N/A			Yes
Refinery: CPI Separator	Waste Treatment Unit	014	Unknown	D001, D003, D018, D028, F037	N/A	N/A	N/A			No
Refinery: Trap No. 2 Sump	Waste Treatment Unit (SWMU 3)	015	1943	-	N/A	N/A	N/A	2013		No
Refinery: #3 Trap Separator	Waste Treatment Unit	016	Unknown	-	N/A	N/A	N/A			No
Refinery: Storage Bin	Misc. Storage Container	017	1989	-	15 cy	0	1995			No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Storage Bin*	Misc. Storage Container	018	1989	D001, D003, D008, D018, K052, K169, K171	15 cy	0	1995			No
Refinery: Storage Bin*	Misc. Storage Container	019	1992	K050	15 cy	N/A	N/A			No
Refinery: Tank 400*	Tank (Abovegro und)	020	1992	D002, D003, D018, D028	3,763,200 gal	N/A	N/A			No
Refinery: Container Storage Area*	Container Storage Area	021	1992	D002, D003, D018, D028	88 drums	N/A	N/A			No
Refinery: Waste Pile	Land Applicatio n	022	1995	-	6 cy	0	1995	1995		No
Refinery: Vehicle Maintenanc e Battery Storage Area*	Container Storage Area	023	Prior to 1993	D002, D008	6 batteries	0	No longer regulated			No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Weathered Tank Bottom Storage Area	Surface Impoundment	024	Prior to 1993	-	11,700 cf	Unknown	Unknown	2001		No
Refinery: Temporary Frac Tank*	Misc. Storage Container	025	Prior to 1993	F037	50 drums	N/A	N/A			No
Refinery: Platinum Catalyst Container Storage Area*	Container Storage Area	026	1995	D018	64 drums	N/A	N/A			No
Refinery: Temporary CBM Tank, Portable*	Container Storage Area	027	1995	D002	6,300 gal	0	1996	1996	N/A	No
Refinery: Temporary CBM Tank, Portable*	Container Storage Area	028	1995	D002	6,300 gal	0	1996	1996	N/A	No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Temporary ARN Tank, Portable	Container Storage Area	029	1995	-	6,300 gal	0	1996	1996	N/A	No
Refinery: Temporary ARN Tank, Portable	Container Storage Area	030	1995	-	6,300 gal	0	1996	1996	N/A	No
Refinery: Tank 51*	Tank (Abovegro und)	031	1995	D002, D003, D018, D028	3,383,940 gal	N/A	N/A			No
Refinery: Tank 65*	Tank (Abovegro und)	032	1998	D002, D003, D018, D028	80,000 bbls	N/A	N/A			No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Tank Fire Walls (consisting of 33 tanks: 1, 2, 47 (removed), 50, 51, 85, 97, 202, 203, 204, 206, 314 to 317, 319 to 327, 330 (formerly 207), 331, 332, 348, 811, 820, and 824 to 826)	SWMU 1	-	Unknown	-	Unknown	Unknown	Unknown	2013		Yes
Refinery: Buried Cell Near the Bauxite Pond	SWMU 2	-	Unknown	-	Unknown	Unknown	Unknown	2012		No
Refinery: Area Immediately Surrounding the Bauxite Pond	SWMU 5	-	Unknown	-	Unknown	Unknown	Unknown	2012		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Dehydrator Tank Fire Walls	SWMU 6	-	1953	-	15,571 cy	Unknown	1973	2012		No
Refinery: Maintenance Area Ditch	SWMU 7	-	Unknown	-	300 cf	0	Unknown	2012		No
Refinery: Detol Pad	SWMU 8	-	1987	-	47 cy	0	1993	2012		No
Refinery: Sandblast Grit Pile	SWMU 9	-	N/A	-	-	0	N/A	1994		No
Refinery: Tanks 203 and 204*	SWMU 12	-	1940	K170	-	N/A	2019			Yes
RBTF: Tank 830	SWMU 14	-	N/A	N/A	N/A	N/A	N/A			No
Refinery: Tank 307	SWMU 15	-	N/A	N/A	N/A	N/A	N/A			Yes
Refinery: Storm Water System	SWMU 23	-	N/A	N/A	N/A	N/A	N/A			No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Dumpster (Cafeteria, Labs, Offices)	Misc. Container	301	1999	N/A	8 cy	0	Unknown	2010		No
WP: Dumpster (Machine Shops)	Misc. Container	302	1999	N/A	8 cy	0	Unknown	2010		No
WP: Dumpster (Evaporators)	Misc. Container	303	1999	N/A	6 cy	0	Unknown	2010		No
WP: Dumpster (Water Treatment Plant)	Misc. Container	304	1999	N/A	6 cy	0	Unknown	2010		No
WP: Dumpster (Carpenter Shop)	Misc. Container	305	1999	N/A	4 cy	0	Unknown	2010		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Dumpster (Storeroom)	Misc. Container	306	1999	N/A	8 cy	0	Unknown	2010		No
WP: Dumpster (Storeroom)	Misc. Container	307	1999	N/A	8 cy	0	Unknown	2010		No
WP: Dumpster (24 Machine Maint. Shops)	Misc. Container	308	1999	N/A	8 cy	0	Unknown	2010		No
WP: Dumpster (24 Machine)	Misc. Container	309	1999	N/A	6 cy	0	Unknown	2010		No
WP: Dumpster (Contractor Hill Dumpster)	Misc. Container	310	1999	N/A	8 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (24 Machine)	Misc. Container	311	1999	N/A	30 cy	0	Unknown	2010		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Roll-off Dumpster (24 Machine)	Misc. Container	312	1999	N/A	30 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (24 Machine)	Misc. Container	313	1999	N/A	30 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (24 Machine)	Misc. Container	314	1999	N/A	40 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (Mobile Shop)	Misc. Container	315	1999	N/A	30 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (Mobile Shop)	Misc. Container	316	1999	N/A	30 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (Truck Staging Area)	Misc. Container	317	1999	N/A	30 cy	0	Unknown	2010		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Roll-off Dumpster (Storeroom Dumpster)	Misc. Container	318	1999	N/A	30 cy	0	Unknown	2010		No
WP: Salvage Yard Piles	Waste Pile (SWMU 16)	319	1999	N/A	-	0				Yes
WP: Waste Piles near Paint Shop	Waste Pile (SWMU 20)	320	1999	N/A	-	0	Unknown			Yes
WP: Container Storage Area	Container Storage Area	321	1999	N/A	-	0	Unknown	2010		No
WP: Container Storage Area*	Container Storage Area	322	1999	D001, D002, D018, D039, D040, F003, F005	-	0	Unknown	2010		No
WP: Enclosed Dumpsters for Asbestos Waste	Misc. Container	323	1999	N/A	40 cy	0	Unknown	2010		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Storage Area for Asbestos Containing Materials	Container Storage Area (SWMU 18)	324	1999	N/A	-	0	Unknown			No
WP: Safety-Kleen Parts Washer (Pump Shop)	Tank	325	1999	D001, D018, D039, D040	30 gal	0	Unknown	2010		No
WP: Safety-Kleen Parts Washer (Mobile Shop)	Tank	326	1999	D001, D018, D039, D040	30 gal	0	Unknown	2010		No
WP: Safety-Kleen Parts Washer (Mobile Shop)	Tank	327	1999	D001, D018, D039, D040	30 gal	0	Unknown	2010		No
WP: Landfill	Landfill	401	Unknown	-	-	-	-	Pre-2015	Pre-2015	No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Storage Area for Asbestos Containing Material	Container Storage Area (SWMU 18)	402	N/A	N/A	N/A	N/A	N/A	2015		No
WP: Container Storage Area (General Storeroom)*	Container Storage Area	403	Unknown	D001, D002, D003, F003, F005	Unknown	0	Unknown	2010		No
WP: Misc. Storage Container	Misc. Storage Container	404	Unknown	N/A	40 cy	0	Unknown	2008		No
WP: Misc. Storage Container*	Misc. Storage Container	405	Unknown	D001, D018, D039, D040	40 cy	0	Unknown	2010		No
WP: Trash Dumpsters	Misc. Storage Container	406	Unknown	N/A	Unknown	0	Unknown	2010		No
WP: Dumpster – Recaust Tank Bottoms	Misc. Storage Container	408	Unknown	N/A	Unknown	0	Unknown	2008		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Dumpster – Recaust Tank Bottoms*	Misc. Storage Container	409	Unknown	D002, D003	Unknown	0	Unknown	2010		No
WP: Misc. Storage Container*	Misc. Storage Container	410	Unknown	D001, D018, D039, D040	30 gal	0	Unknown	2010		No
WP: Misc. Storage Container*	Misc. Storage Container	411	Unknown	D001, D018, D039, D040	30 gal	0	Unknown	2010		Yes
WP: Misc. Storage Container	Misc. Storage Container	412	Unknown	D001, D018, D039, D040	30 gal	0	Unknown	2010		No
WP: Mill Wide Process Waste Water Collection System*	Neutralization only	413	Unknown	D002, D003	-	N/A	N/A	N/A		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Paint Storage Room*	Container Storage Area (SWMU 22)	414	Unknown	D001, F003, F005	-	0	Unknown	2010		Yes
WP: Container Storage Area	Container Storage Area	415	Unknown	N/A	-	0	Unknown	2010		No
WP: Misc. Storage Container	Misc. Storage Container	416	Unknown	N/A	40 cy	0	Unknown	2008		No
WP: Incinerator	Incinerator (SWMU 19)	417	Unknown	N/A	-	0	Unknown			Yes
WP: Wood Waste Pile and Dumpsters	Container Storage Area	418	Unknown	N/A	-	0	2006	2008		No
WP: Dumpsters (Paper Machine)	Misc. Storage Container	419	Unknown	N/A	-	0	Unknown	2008		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Dumpsters (Mobile Shop)	Misc. Storage Container	420	Unknown	N/A	-	0	Unknown	2008		No
WP: Dumpsters (Salvage Yard)	Misc. Storage Container	421	Unknown	N/A	-	0	Unknown	2008		No
WP: Dumpsters (Cafeteria & General Office)	Misc. Storage Container	422	Unknown	N/A	-	0	Unknown	2008		No
WP: Turnaround /Outage Dumpsters	Misc. Storage Container	423	Unknown	N/A	-	0	Unknown	2008		No
WP: Salvage Yard Piles	Misc. Storage Container (SWMU 16)	424	Unknown	N/A	-	0	Unknown			Yes
WP: Dumpsters (Paint Shop)	Misc. Container	425	Unknown	N/A	-	0	Unknown	2008		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Waste Piles Near Paint Shop	Waste Pile (SWMU 20)	426	Unknown	N/A	-	0	Unknown			Yes
WP: Abandoned Cooling Tower Basin	Waste Pile (SWMU 17)	427	N/A	N/A	N/A	0	N/A			No
WP: Main Sewer Dump Station	Discharge to Sewer/POTW or NPDES	428	Unknown	N/A	-	0	Unknown	2010		No
WP: Maintenance Shop Dumpsters	Misc. Container	429	Unknown	N/A	-	0	Unknown	2008		No
WP: Storeroom Dumpsters	Misc. Container	430	Unknown	N/A	-	0	Unknown	2008		No
Areas of Concern (AOCs)										
Refinery: Groundwater Region 7	AOC 10	-	N/A	N/A	N/A	N/A	N/A			Yes

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Groundwater Regions 1, 2, 3, 4, 5, and 6	AOC 11	-	N/A	N/A	N/A	N/A	N/A			Yes
WP: West Property Groundwater PMZ	AOC 21	-	N/A	N/A	N/A	N/A	N/A			Yes
RBTF: Historical Tank Footprint	AOC 24	-	N/A	N/A	N/A	N/A	N/A			Unknown
RBTF: Abovegroun d Piping	AOC 25	-	N/A	N/A	N/A	N/A	N/A			Yes
RBTF: Former Truck Loading Terminal	AOC 26	-	N/A	N/A	N/A	N/A	N/A			Unknown
RBTF: City of Pasadena Laydown Storage Yard	AOC 27	-	N/A	N/A	N/A	N/A	N/A			Unknown

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Aboveground Tanks and Surface Conveyance Feature	AOC 28	-	N/A	N/A	N/A	N/A	N/A			Unknown
WP: Former Roof Shingle Production Area	AOC 29	-	N/A	N/A	N/A	N/A	N/A			Unknown
SP: Fuel Storage Tanks	AOC 30	-	N/A	N/A	N/A	N/A	N/A			Unknown
SP: Former Concrete Batch Plant Equipment	AOC 31	-	N/A	N/A	N/A	N/A	N/A			Unknown
SP: Former Pond 1	AOC 32	-	N/A	N/A	N/A	N/A	N/A			Unknown
SP: Former Pond 2	AOC 33	-	N/A	N/A	N/A	N/A	N/A			Unknown

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
SP: Former Pond 3	AOC 34	-	N/A	N/A	N/A	N/A	N/A			Unknown
SP: Equipment Washdown Pad and Sump	AOC 35	-	N/A	N/A	N/A	N/A	N/A			Unknown

1 Indicate by asterisk (*) those waste management units that have received any hazardous waste constituent listed in Appendix VIII of 40 CFR Part 261.
2 For the purposes of this Compliance Plan Application, a waste management unit receiving hazardous waste after July 26, 1982 shall be considered a Regulated Unit. A waste management unit that ceased receiving hazardous waste on or before that date shall be considered a Solid Waste Management Unit (SWMU).
3 Date the applicant submitted certification of closure to the Commission.
4 Hazardous constituents are those hazardous constituents listed in Appendix IX of 40 CFR Part 264.

Table XI.E. -General Information

Waste Management Area/Units Description	N.O.R Unit No. (as applicable)	Compliance Period For WMA Year(s) [1] [2]
Moat	001	12
Stormwater Pond	002	19
Bauxite Pond	007	45

1. (The compliance period is the number of years equal to the active life of the waste management area as defined in 30 TAC 335.162).
2. In instances where the compliance period is equal to or exceeds 30 years, the maximum amount of financial assurance required will be based on 30 years because the required post-closure care period to perform corrective action and groundwater monitoring is 30 years. In instances where the compliance period is less than 30 years, the financial assurance for corrective action or compliance monitoring will be based on the longest time frame established by one of the following criteria:
    a. the duration of your compliance plan;
    b. the time frame for clean-up based on model projections and historical data as approved by the Executive Director; or
    c. the compliance period for the unit/area.

Table I.1-Description of Proposed Application Changes

Permit/Compliance Plan Application Appendix/Section	Brief Description of Proposed Change	Modification or Amendment Type	Supporting Regulatory Citation
Table I	Updated facility contacts	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix III.D	Provided revised inspection checklist	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix III.E	Provided Contingency Plan Summary; updated Tables III.E.1, III.E.2, III.E.3	Renewal and minor amendment	30 TAC 305.62(c)(2)
Table IV.B and Table V.D.1	Added footnote	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix VI	Added West Property information to Geology Report	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix VII	Updated closure cost estimate for stormwater pond and post-closure cost estimates for all units	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix VII.A	In Stormwater Pond Closure Plan, added footnote to Section 3.3.5.2 to allow for equivalent liner material	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix IX	Updated Preliminary Review Facility Checklist and Preliminary Review Unit Checklists with information for West Property and South Property	Renewal and minor amendment	30 TAC 305.62(c)(2)
Section XI	Added West Property PMZ to Compliance Plan	Renewal and minor amendment	30 TAC 305.62(c)(2)

Permit/Compliance Plan Application Appendix/Section	Brief Description of Proposed Change	Modification or Amendment Type	Supporting Regulatory Citation
Appendix XI	Updated Table XI.A.1. with information for West Property; provided new and updated CP Attachment A sheets 1-10	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix XI.D.6	Added West Property Groundwater RAP	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix XI.E	Updated financial assurance cost estimate for corrective action	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix XI-CP Tables	Updated CP Tables I, III, IIIA, and V to include West Property PMZ	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix XI-CP Tables	Updated CP Table II with new AOCs for West Property, South Property, and Red Bluff Tank Farm	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix XI-CP Tables	Request to submit an annual report by January 21st of each year to document the groundwater monitoring results for the site's Compliance Monitoring and Corrective Action Monitoring Programs.	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix XI-CP Tables	Request change from semi-annual to annual monitoring for the Moat WMU.	Renewal and minor amendment	30 TAC 305.62(c)(2)
~~Appendix XI-CP Tables~~	~~Updated CP Table VIII to allow 60 days after beginning of the first and third quarter for sampling (was 30 days)~~	~~Renewal and minor amendment~~	~~30 TAC 305.62(c)(2)~~

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
West Property		
1. Annual Sampling and Analysis Cost:		
A. Background Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
B. Point of Compliance Wells		
(1) Number of wells	0	
2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
C. Recovery Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	0	
D. Corrective Action Observation Wells		
(1) Number of wells	17	
(2) Sample analysis cost per well	$525.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$17850.00	
E. Point of Exposure Wells		
(1) Number of wells	5	
(2) Sample analysis cost per well	$ 525.00	$/well
(3) Number of sampling events per year	2	/yr

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
(4) Sampling cost (1 x 2 x 3)	$5250.00	
F. Supplemental Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
G. Field Quality Control Sampling		
(1) Number of wells	3	
(2) Sample analysis cost per well	$525.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$3150.00	
H. Sampling Analysis Cost (1.A+1.B+1.C+1.D+1.E+1.G)	$26,250.00	
2. Sampling Labor Cost:		
A. Hours of sampling per well	2.5	hrs/well
B. Number of sampling technicians per well	1	/yr
C. Charge per hour	$80.00	$/hr
D. Total number of wells to be sampled annually		
E. Total number of wells sampled semi-annually	22	
F. Total number of wells sampled quarterly		
G. Total number of wells sampled monthly		
H. Total number of wells sampled per year (2D) + (2E x 2) + (2F x 4) + (2G x 12)	44	
I. Sampling Labor Cost (2A x 2B x 2C x 2H)	$8,800.00	
***Annual Groundwater Monitoring Cost**	$35,050.00	
3. Well Installation (typical cost):		
A. Monitor well installation cost per well	$0.00	$/well
B. Number of monitor wells to be installed	0	
C. Cost of monitor well system (A x B)	$0.00	
D. Recovery well installation cost per well	$0.00	$/well

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
E. Number of Recovery Wells to be installed	0	
F. Cost of Recovery well system (D x E)	$0.00	
***Total Well Installation Cost (3C + 3F)**	0	
4. Administrative Cost:		
A. Annual cost for record-keeping and report preparation	$10000	
***Annual Administrative Cost (4A)**	$10000	$
5. Inspection and Maintenance Cost for the Monitoring Program:		
A. Operator's time (hours) on-site for inspections and maintenance per year	50	$/hr
B. Charge or salary per hour	$50.00	$/hr
C. Annual cost of labor (4A x 4B)	$2500.00	$/hr
D. Replacement of parts and equipment per year	$150.00	$/hr
***Annual Inspections / Maintenance Cost for the Groundwater Monitoring Program (5C + 5D)**	$2650.00	

Table XI.E.3. - Financial Assurance Summary

West Property Task	Cost
Annual Off-Site Liquid Treatment / Disposal Cost	
Annual On-Site Treatment / Disposal Cost	
Annual Inspection / Maintenance / Operation Cost For The Corrective Action Program	
Annual Groundwater Monitoring Cost	$35050.00
Annual Administrative Cost	$10000.00
Annual Inspection And Maintenance Cost For The Groundwater Monitoring Program	$2650.00
Annual Sub Total	**$47700.00**
Total Years Used For Calculating Financial Assurance for Corrective Action and/or Compliance Monitoring Program	**30** Years
Remediation Cost (Annual Sub Total x Total Years Used)	$1431000.00
On-Site Waste Water Treatment System Capital Cost Total Well Cost	
10% Contingency	$143100.00
Total Cost	$1574100.00
Grand Total Cost (round to nearest $1000)	**$1574000.00**

Table XI.E.3. - Financial Assurance Summary

Total Costs for all areas subject to RCRA Corrective Action and Compliance Monitoring Programs	
Task	Cost
Annual Off-Site Liquid Treatment / Disposal Cost	$6100.00
Annual On-Site Treatment / Disposal Cost	
Annual Inspection / Maintenance / Operation Cost For The Corrective Action Program	$26500.00
Annual Groundwater Monitoring Cost	$82900.00
Annual Administrative Cost	$42000.00
Annual Inspection And Maintenance Cost For The Groundwater Monitoring Program	$6305.00
Annual Sub Total	**$163805.00**
Total Years Used For Calculating Financial Assurance for Corrective Action and/or Compliance Monitoring Program	**30** Years
Remediation Cost (Annual Sub Total x Total Years Used)	$4914150.00
On-Site Waste Water Treatment System Capital Cost Total Well Cost	
10% Contingency	$491415.00
Total Cost	$54055665.00
Grand Total Cost (round to nearest $1000)	**$5406000.00**

Clean Copy Revised Tables

CP Table II: Solid Waste Management Units and/or Areas of Concern Addressed in Permit Section XI.H. for which Corrective Action Applies Pursuant to 30 TAC Section 335.167

Unit Name	NOR Number, if applicable	SWMU or AOC	Affected Media[1]	Date Program Requirement and Remedy Standard Completed
Refinery: Tank Fire Walls (consisting of 33 tanks: 1, 2, 47 (removed), 50, 51, 85, 97, 202, 203, 204, 206, 314 to 317, 319 to 327, 330 (formerly 207), 331, 332, 348, 811, 820, and 824 to 826)		SWMU 1	GW and Soil	NFA approved for soils July 26, 2013; Risk Reduction Rule Standard 3 (RRR3)
Refinery: Buried Cell Near the Bauxite Pond		SWMU 2	Soil	NFA approved July 26, 2013; RRR3
Refinery: Trap No. 2 Sump	015	SWMU 3	Soil	NFA approved July 26, 2013; RRR3
Refinery: Waste Pile Containing Coke at Gate 14	005	SWMU 4	Soil	NFA approved July 26, 2013; RRR3
Refinery: Area Immediately Surrounding the Bauxite Pond		SWMU 5	Soil	NFA approved July 26, 2013; RRR3
Refinery: Dehydrator Tank Fire Walls		SWMU 6	Soil	NFA approved July 26, 2013; RRR3
Refinery: Maintenance Area Ditch		SWMU 7	Soil	NFA approved July 26, 2013; RRR3
Refinery: Detol Pad		SWMU 8	Soil	NFA approved July 26, 2013; RRR3
Refinery: Sandblast Grit Pile		SWMU 9	Soil	NFA approved July 26, 2013; RRR3
Refinery: Groundwater Region 7 PMZ		AOC 10	GW	
Refinery: Site-Wide PMZ (Groundwater Regions 1, 2, 3, 4, 5, and 6)		AOC 11	GW	
Refinery: Tanks 203 and 204		SWMU 12	GW and soil	

Refinery: Tank 97	013	SWMU 13	GW and soil	
RBTF: Tank 830		SWMU 14	Pending	
Refinery: Tank 307		SWMU 15	Pending	
WP: Salvage Yard Piles	319/424	SWMU 16	Soil	
WP: Abandoned Cooling Tower Basin	427	SWMU 17	Pending	
WP: Storage Area for Asbestos Containing Materials	324/402	SWMU 18	Soil	
WP: Incinerator	417	SWMU 19	GW and Soil	
WP: Waste Piles Near Paint Shop	320/426	SWMU 20	GW and Soil	
WP: West Property Groundwater PMZ	320/414/417/426	AOC 21	GW	
WP: Paint Storage Room	414	SWMU 22	GW and Soil	
RBTF: Storm Water System		SWMU 23	Pending	
RBTF: Historical Tank Footprint		AOC 24	Pending	
RBTF: Aboveground Piping		AOC 25	Pending	
RBTF: Former Truck Loading Terminal		AOC 26	Pending	
RBTF: City of Pasadena Laydown Storage Yard		AOC 27	Pending	
WP: Aboveground Tanks and Surface Conveyance Feature		AOC 28	Pending	
WP: Former Roof Shingle Production Area		AOC 29	Pending	
SP: Fuel Storage Tanks		AOC 30	Pending	
SP: Former Concrete Batch Plant Equipment		AOC 31	Pending	
SP: Former Pond 1		AOC 32	Pending	
SP: Former Pond 2		AOC 33	Pending	
SP: Former Pond 3		AOC 34	Pending	

SP: Equipment Washdown Pad and Sump		AOC 35	Pending	

Refinery = SWMU or AOC located on Main Refinery

RBTF = SWMU or AOC located on Red Bluff Tank Farm

WP = SWMU or AOC located on West Property

SP = SWMU or AOC located on South Property

SWMU= Solid Waste Management Unit

AOC= Area of Concern

Foot Note:

1. Specify the affected media [i.e. soil, groundwater (GW), surface water (SW), sediment (SED)].
2. For each SWMU or AOC, specify the Remedy Standard that was completed and the date of the Commission's No Further Action (NFA) letter for the media of concern.
3. For sites with FOA authorization, list the SWMUs and/or AOCs that are subject to corrective action at the site. Please separate the SWMUs and/or AOCs that are located within the FOA boundary from the SWMUs and/or AOCs that are located outside of the FOA boundary.

Note:

CP Table II lists SWMUs and/or AOCs which have been identified in the RCRA Facility Assessment (RFA) Report as having a release(s) or a potential release(s) of hazardous waste, hazardous constituents, or other constituents of concern. The permittee is thus required to meet Corrective Action Objectives for the SWMUs and/or AOCs in accordance with Permit Section XI.H. and 30 TAC Section 335.167.

The permittee shall update CP Table II when a new SWMU and/or AOC that requires corrective action is identified. The permittee shall also update CP Table II as outlined in Footnote 2 when the corrective action status of a media for a SWMU or AOC has changed.

SWMUs and/or AOCs shall not be deleted from this table when the Corrective Action Objectives have been completed and a No Further Action (NFA) determination has been approved for the SWMU and/or AOC. In accordance with Permit Section XI.H., CP Table II is intended to be a historical record of the facility's corrective actions and to reflect when the Corrective Action Objectives have been met for each SWMU/AOC.

There may be cases in which the permittee fulfills the Corrective Action Objectives for soils at a SWMU/AOC, but long-term groundwater monitoring and corrective action may be necessary to meet the groundwater Corrective Action Objectives. In such instances, the SWMU/AOC would be listed in CP Table I, Item C, and would be subject to all applicable provisions of this Compliance Plan. If a release from a SWMU/AOC is commingled with a RCRA-regulated unit, then the unit and the SWMU/AOC would be listed in CP Table I, Item D. In accordance with Permit Section XI.H., once the Corrective Action Objectives for groundwater are completed, the permittee shall modify or amend the Compliance Plan to reassign the SWMU/AOC in CP Table I, Item C or Item D, to CP Table II. CP Table II should reflect the new status of the SWMU/AOC. It should include the Remedy Standard achieved for all media of concern and the date of the Commission's NFA approval letter for each SWMU/AOC.

Permittee: Pasadena Refining System, Inc.

CP Table III: Corrective Action Program Table of Detected Hazardous and Solid Waste Constituents and the Groundwater Protection Standard

Unit Name	**Column A** Hazardous Constituents	**Column B** Groundwater Protection Standards (mg/l) at the POC[2]		**Column C** Groundwater Protection Standards (mg/l) at the POE or APOE, or FBOC[1,2]	
Ponds WMA	Benzene	0.588	^{SW}GW		N/A
	o-Cresol	60	^{SW}GW		N/A
	m- and p-Cresol	60	^{SW}GW		N/A
	2,4-Dimethylphenol	9.41	^{SW}GW		N/A
	Ethylbenzene	29.3	^{SW}GW		N/A
	2-Methylnaphthalene	3.53	^{SW}GW		N/A
	Naphthalene	14.7	^{SW}GW		N/A
	Phenol	324	^{SW}GW		N/A
	Toluene	56.5	^{SW}GW		N/A
	Xylenes	100	^{SW}GW		N/A
	1,2-Dichloroethane	4.3	$^{Air}GW_{Inh\text{-}V}$		N/A
	Chloroethane	9.8	$^{GW}GW_{ING}$		N/A
	Vinyl Chloride	0.002	$^{GW}GW_{ING}$		N/A
	Benzo(a) pyrene	0.01	^{SW}GW		N/A
	Chrysene	0.01	^{SW}GW		N/A
	Lead	0.624	^{SW}GW		N/A
	Chromium	5.84	^{SW}GW		N/A
Refinery: Site-Wide PMZ (Groundwater Regions 1, 2, 3, 4, 5, & 6)	Benzene	0.588	^{SW}GW	0.588	^{SW}GW
	Benzo(a)anthracene	0.01	^{SW}GW	0.01	^{SW}GW
	Bis(2-ethylhexyl)phthalate	2.59	^{SW}GW	2.59	^{SW}GW
	1,2-Dichloroethane	4.30	^{SW}GW	4.30	^{SW}GW
	Ethylbenzene	29.3	^{SW}GW	29.3	^{SW}GW
	Methyl t-butyl ether (MTBE)	28.2	^{SW}GW	28.2	^{SW}GW
	2-Methylnaphthalene	3.53	^{SW}GW	3.53	^{SW}GW
	Naphthalene	14.7	^{SW}GW	14.7	^{SW}GW
	Toluene	56.5	^{SW}GW	56.5	^{SW}GW
	Xylenes	100	^{SW}GW	100	^{SW}GW

Permittee: Pasadena Refining System, Inc.

Unit Name	**Column A** Hazardous Constituents	**Column B** Groundwater Protection Standards (mg/l) at the POC[2]		**Column C** Groundwater Protection Standards (mg/l) at the POE or APOE, or FBOC[1,2]	
	Arsenic	0.165	^{SW}GW	0.165	^{SW}GW
	Chromium	5.84	^{SW}GW	5.84	^{SW}GW
	Lead	0.624	^{SW}GW	0.624	^{SW}GW
	Vanadium	10.6	^{SW}GW	10.6	^{SW}GW
Refinery: Groundwater Region 7 PMZ	Benzene	0.005	^{GW}GW$_{ING}$	0.005	^{GW}GW$_{ING}$
	Benzo(a)anthracene	0.0091	^{GW}GW$_{ING}$	0.0091	^{GW}GW$_{ING}$
	o-Cresol	1.2	^{GW}GW$_{ING}$	1.2	^{GW}GW$_{ING}$
	m- and p-Cresol	0.12	^{GW}GW$_{ING}$	0.12	^{GW}GW$_{ING}$
	1,2-Dichloroethane	0.005	^{GW}GW$_{ING}$	0.005	^{GW}GW$_{ING}$
	Diethylphthalate	20	^{GW}GW$_{ING}$	20	^{GW}GW$_{ING}$
	2,4-Dimethylphenol	0.49	^{GW}GW$_{ING}$	0.49	^{GW}GW$_{ING}$
	Ethylbenzene	0.7	^{GW}GW$_{ING}$	0.7	^{GW}GW$_{ING}$
	Methyl Ethyl Ketone (2-Butanone)	15	^{GW}GW$_{ING}$	15	^{GW}GW$_{ING}$
	2-Methylnaphthalene	0.098	^{GW}GW$_{ING}$	0.098	^{GW}GW$_{ING}$
	Naphthalene	0.49	^{GW}GW$_{ING}$	0.49	^{GW}GW$_{ING}$
	Toluene	1	^{GW}GW$_{ING}$	1	^{GW}GW$_{ING}$
	Xylenes	10	^{GW}GW$_{ING}$	10	^{GW}GW$_{ING}$
	Arsenic	0.01	^{GW}GW$_{ING}$	0.01	^{GW}GW$_{ING}$
	Barium	2	^{GW}GW$_{ING}$	2	^{GW}GW$_{ING}$
	Chromium	0.1	^{GW}GW$_{ING}$	0.1	^{GW}GW$_{ING}$
	Lead	0.015	^{GW}GW$_{ING}$	0.015	^{GW}GW$_{ING}$
	Nickel	0.49	^{GW}GW$_{ING}$	0.49	^{GW}GW$_{ING}$
	Vanadium	0.044	^{GW}GW$_{ING}$	0.044	^{GW}GW$_{ING}$
	Zinc	7.3	^{GW}GW$_{ING}$	7.3	^{GW}GW$_{ING}$
WP: West Property Groundwater PMZ	Benzene	0.005	^{GW}GW$_{ING}$	0.005	^{GW}GW$_{ING}$
	Pentachlorophenol	0.001	^{GW}GW$_{ING}$	0.001	^{GW}GW$_{ING}$
	Tetrachloroethene	0.005	^{GW}GW$_{ING}$	0.005	^{GW}GW$_{ING}$
	Trichloroethene	0.005	^{GW}GW$_{ING}$	0.005	^{GW}GW$_{ING}$
	1,1-Dichloroethene	0.007	^{GW}GW$_{ING}$	0.007	^{GW}GW$_{ING}$

Permittee: Pasadena Refining System, Inc.

Unit Name	**Column A** Hazardous Constituents	**Column B** Groundwater Protection Standards (mg/l) at the POC[2]		**Column C** Groundwater Protection Standards (mg/l) at the POE or APOE, or FBOC[1,2]	
	cis-1,2-Dichloroethene	0.07	$^{GW}GW_{ING}$	0.07	$^{GW}GW_{ING}$
	trans-1,2-Dichloroethene	0.1	$^{GW}GW_{ING}$	0.1	$^{GW}GW_{ING}$
	Vinyl Chloride	0.002	$^{GW}GW_{ING}$	0.002	$^{GW}GW_{ING}$
	Dioxin/Furan (as 2,3,7,8-TCDDD toxicity equivalent quotients)	3×10^{-8} TEQ	$^{GW}GW_{ING}$	3×10^{-8} TEQ	$^{GW}GW_{ING}$
	Arsenic	0.01	$^{GW}GW_{ING}$	0.01	$^{GW}GW_{ING}$
	Polychlorinated Biphenyls	0.0005	$^{GW}GW_{ING}$	0.0005	$^{GW}GW_{ING}$
	Lead	0.015	$^{GW}GW_{ING}$	0.015	$^{GW}GW_{ING}$

Notes:

a) If the Corrective Action Program (Provision XI.E.) does not apply to the RCRA-regulated units, SWMUs, or AOCs at the facility, mark "Reserved" next to the CP Table III heading.

b) CP Table III represents the long list of hazardous constituents that are reasonably expected to be in, or derived from, the waste placed in each RCRA-regulated unit, SWMU, and/or AOC listed in the table. CP Table III also lists the hazardous constituents that have been historically detected in the groundwater for each RCRA-regulated unit, SWMU, and/or AOC. These hazardous constituents are monitored in accordance with Provision XI.F.3.c.(1).

c) In accordance with Provision XI.D.6., the Groundwater Protection Standards (GWPS) must be met before the RCRA-regulated unit, SWMU, and/or AOC can exit the Corrective Action Program.

d) If applicable, "Appendix IX" can be used in Column A for a unit instead of listing each chemical of concern (COC). The permittee may petition the Executive Director for the deletion of a specific COC from the Appendix IX analysis if the permittee can demonstrate that the COC was never used in the facility's operations nor was disposed of in the waste management area.

e) Attenuation monitoring point (AMP) wells, corrective action system (CAS) wells, and corrective action observation (CAO) wells should not be listed in CP Table III. These wells should only be depicted in the CP Attachment A maps. Once an AMP, CAS, or CAO well meets its respective attenuation action levels (AALs) or GWPS, then the Permittee may propose to discontinue monitoring that well without modification to the Permit. If the AMP, CAS, or CAO well is listed in CP Table III, then any proposed change to the well would require modification to the Permit. Changes to the wells depicted in the CP Attachment A maps can be approved in the Groundwater Monitoring Report required by CP Table VII and become a part of the Permit by reference.

Footnotes:

1. Use Column C to specify the GWPS assigned at a POE or APOE (i.e. for sites with MNA or PMZ proposals as applicable under TRRP), or FBOC for those sites with FOA authorization. Put "N/A" if a specific program or column item is not applicable.
2. For each COC, select the appropriate GWPS designation and definition to demonstrate that the corrective action program objectives are being achieved either under the Risk Reduction Rules (RRR) pursuant to 30 TAC Chapter 335 or the Texas Risk Reduction Program (TRRP) pursuant to 30 TAC Chapter 350. The RRR and TRRP GWPS designations and definitions may not be combined pursuant to 30 TAC Section 350.2(m).

Permittee: Pasadena Refining System, Inc.

TRRP GWPS Designations and Definitions

$^{GW}GW_{Ing}$	ACL pursuant to 30 TAC §335.160(b) based upon the PCL determined under RSA or RSB (Residential or Commercial /Industrial) for Class 1 or Class 2 Groundwater ingestion PCL of 30 TAC Chapter 350. The PCL value, Column B, will change as updates to the rule are promulgated. Changes to the rule automatically change the concentration value established in Column B in this table.. In accordance with §350.72(b), GWGWIng, PCLs may need to be adjusted to lower concentrations to meet the cumulative carcinogenic risk level (less than or equal to 1x10-4) and hazard index criteria (less than or equal to 10) when there are more than 10 carcinogenic and/or more than 10 non-carcinogenic chemicals of concern within a source medium.
MCL	ACL pursuant to 30 TAC §335.160(b) based upon the Protective PCL determined under RSA or RSB for Groundwater- to-surface water PCL of 30 TAC Chapter 350. The PCL value, Column B, will change as updates to the rule are promulgated. Changes to the rule automatically change the concentration value established in Column B in this table.

CP Table VI: Compliance Period for RCRA-Regulated Units

Moat (NOR 001)	Year or Number of Years
Year Waste Management Activities Initiated	1979
Year Closed	1991
Compliance Period (years)	12 years[1]
Compliance Period Began	2007
Stormwater Pond	Year or Number of Years
Year Waste Management Activities Initiated	1973
Year Closed	1992
Compliance Period (years)	19 years[1]
Compliance Period Began	1998
Bauxite Pond	Year of Number of Years
Year Waste Management Activities Initiated	1947
Year Closed	1992
Compliance Period (years)	45 years
Compliance Period Began	1998

[1]The initial compliance period has been achieved, but groundwater monitoring is still ongoing.

CP Table VIII: Compliance Schedule

Item	**Compliance Schedule** (from the date of issuance of the Compliance Plan unless otherwise specified)	**Regulatory Citation**	**Requirement**
A.	60 days	Compliance Plan	Submit to the Executive Director a schedule summarizing all activities required by the Compliance Plan. The schedule shall list the starting dates of all routine activities. The permittee shall include an updated schedule in the groundwater monitoring report required by Provision XI.G.3. and CP Table VII. The schedule shall list the activity or report, the Compliance Plan Section which requires the activity or report, and the calendar date the activity or report is to be completed or submitted (if this date can be determined.)
B.	Requirement completed on 10/26/2010	30 TAC §335.163(4) and Provision XI.F.2.	Submit to the Executive Director for review and approval a Sampling & Analysis Plan (SAP) unless the SAP has been submitted with the application and referenced in Provision I.B.
C.	During the first thirty (30) days of each first and third quarter	30 TAC §335.166	Corrective Action monitoring shall be conducted on a semiannual basis for the RCRA-regulated units listed in CP Table I.A. which are subject to the Corrective Action Program.
D.	During the first thirty (30) days of each first quarter	30 TAC §335.165	Compliance Monitoring shall be conducted on an annual basis for the RCRA-regulated units listed in CP Table I.B. which are subject to the Compliance Monitoring Program.
E.	During the first thirty (30) days of each first and third quarter	30 TAC §335.167	Corrective Action monitoring shall be conducted on a semiannual basis for the solid waste management units (SWMUs) and/or areas of concern (AOCs) listed in CP Table I.C. which are subject to the Corrective Action Program.

Item	**Compliance Schedule** (from the date of issuance of the Compliance Plan unless otherwise specified)	**Regulatory Citation**	**Requirement**
F.	During the first thirty (30) days of each first and third quarter	30 TAC §335.151	Alternative Corrective Action monitoring shall be conducted on a semiannual basis for the RCRA-regulated units, SWMUs, and/or AOCs listed in CP Table I.D. which are subject to the Corrective Action Program.
G.	Not Applicable	30 TAC Section 335.156 and Chapter 350	FOA Corrective Action monitoring shall be conducted on a semiannual basis for the RCRA-regulated units, SWMUs, and/or AOCs listed in CP Table I.E., which are located within the FOA Boundary and are subject to the Corrective Action Program.
H.	Requirement completed on 10/16/2012 (West Property PMZ) 7/30/2015 (Site-Wide PMZ, Groundwater Region 7 PMZ)	30 TAC §350.31(g) and §350.33(f) (4)(C)(i)	If a plume management zone (PMZ) has been authorized, submit to the Executive Director proof of compliance with the institutional control requirements which provides notice of the existence and location of the PMZ and which prevents exposure to groundwater from this zone until such a time when the concentrations of the chemicals of concern are less than the groundwater protection standards (GWPS) listed on CP Table III.
I.	Notify within 30 days	30 TAC §350.33(k)	If a PMZ has been authorized, after an unexpected event occurs which indicates that additional response actions will be required at an affected property.

Notes:

1. Please note that Corrective Action monitoring is conducted on semiannual basis unless a less frequent monitoring schedule is approved based on plume stability and achievement of Corrective Action objectives.

Table XI.A.1. - Facility History for Waste Management Units

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Moat*	Surface Impoundment	001	1/1/1979	D002, D003, D007, D018, D026, D028 F037, K049, K050, K169	3.2 acres	Unknown	12/31/1989	1/1/1991	4/9/1991	Yes
Refinery: Stormwater Pond*	Surface Impoundment	002	1/1/1973	D002, D003, D008, D018, D026, D028, F037, K049, K050, K052	4.9 acres	Unknown	prior to May 1990	6/30/1992		Yes
Refinery: Barrel Storage Yard*	Container Storage Area	004	1/1/1981	D001, D008, U077	188 drums	0	1/1/1994	10/6/1994	10/6/1994	No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Bauxite Pond*	Surface Impoundment	007	1/1/1920	D002, D018, K050	0.7 acres	Unknown	12/31/1988	1/1/1990	3/20/1992	Yes
Refinery: Waste Pile Containing Coke at Gate 14	Land Application (SWMU 4)	005	1/1/1978	-	1800 cy	N/A	N/A	2013		No
Refinery: Road Fill	Landspreading Area	008	N/A	-	108,440 cy	N/A	N/A			No
Refinery: Tank	Tank (Aboveground)	009	Unknown	-	18,700 gallons	0	Prior to 1990	1995		No
Refinery: Storage Bin*	Misc. Storage Container	010	1989	D001, D007, D008, D018, D023, D024, D025, F037, K049, K050, K052, K169, K171	450 cy	N/A	N/A			No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Storage Bin	Misc. Storage Container	011	1989	-	15 cy	0	1995			No
Refinery: Storage Bin*	Misc. Storage Container	012	1989	F037	15 cy	0	1995			No
Refinery: Tank 97*	Tank (Aboveground; SWMU 13)	013	Unknown	D001, D003, D018, D028 F037	3,864,000 gallons	N/A	N/A			Yes
Refinery: CPI Separator	Waste Treatment Unit	014	Unknown	D001, D003, D018, D028, F037	N/A	N/A	N/A			No
Refinery: Trap No. 2 Sump	Waste Treatment Unit (SWMU 3)	015	1943	-	N/A	N/A	N/A	2013		No
Refinery: #3 Trap Separator	Waste Treatment Unit	016	Unknown	-	N/A	N/A	N/A			No
Refinery: Storage Bin	Misc. Storage Container	017	1989	-	15 cy	0	1995			No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Storage Bin*	Misc. Storage Container	018	1989	D001, D003, D008, D018, K052, K169, K171	15 cy	0	1995			No
Refinery: Storage Bin*	Misc. Storage Container	019	1992	K050	15 cy	N/A	N/A			No
Refinery: Tank 400*	Tank (Aboveground)	020	1992	D002, D003, D018, D028	3,763,200 gal	N/A	N/A			No
Refinery: Container Storage Area*	Container Storage Area	021	1992	D002, D003, D018, D028	88 drums	N/A	N/A			No
Refinery: Waste Pile	Land Application	022	1995	-	6 cy	0	1995	1995		No
Refinery: Vehicle Maintenance Battery Storage Area*	Container Storage Area	023	Prior to 1993	D002, D008	6 batteries	0	No longer regulated			No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Weathered Tank Bottom Storage Area	Surface Impoundment	024	Prior to 1993	-	11,700 cf	Unknown	Unknown	2001		No
Refinery: Temporary Frac Tank*	Misc. Storage Container	025	Prior to 1993	F037	50 drums	N/A	N/A			No
Refinery: Platinum Catalyst Container Storage Area*	Container Storage Area	026	1995	D018	64 drums	N/A	N/A			No
Refinery: Temporary CBM Tank, Portable*	Container Storage Area	027	1995	D002	6,300 gal	0	1996	1996	N/A	No
Refinery: Temporary CBM Tank, Portable*	Container Storage Area	028	1995	D002	6,300 gal	0	1996	1996	N/A	No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Temporary ARN Tank, Portable	Container Storage Area	029	1995	-	6,300 gal	0	1996	1996	N/A	No
Refinery: Temporary ARN Tank, Portable	Container Storage Area	030	1995	-	6,300 gal	0	1996	1996	N/A	No
Refinery: Tank 51*	Tank (Aboveground)	031	1995	D002, D003, D018, D028	3,383,940 gal	N/A	N/A			No
Refinery: Tank 65*	Tank (Aboveground)	032	1998	D002, D003, D018, D028	80,000 bbls	N/A	N/A			No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Tank Fire Walls (consisting of 33 tanks: 1, 2, 47 (removed), 50, 51, 85, 97, 202, 203, 204, 206, 314 to 317, 319 to 327, 330 (formerly 207), 331, 332, 348, 811, 820, and 824 to 826)	SWMU 1	-	Unknown	-	Unknown	Unknown	Unknown	2013		Yes
Refinery: Buried Cell Near the Bauxite Pond	SWMU 2	-	Unknown	-	Unknown	Unknown	Unknown	2012		No
Refinery: Area Immediately Surrounding the Bauxite Pond	SWMU 5	-	Unknown	-	Unknown	Unknown	Unknown	2012		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Dehydrator Tank Fire Walls	SWMU 6	-	1953	-	15,571 cy	Unknown	1973	2012		No
Refinery: Maintenance Area Ditch	SWMU 7	-	Unknown	-	300 cf	0	Unknown	2012		No
Refinery: Detol Pad	SWMU 8	-	1987	-	47 cy	0	1993	2012		No
Refinery: Sandblast Grit Pile	SWMU 9	-	N/A	-	-	0	N/A	1994		No
Refinery: Tanks 203 and 204*	SWMU 12	-	1940	K170	-	N/A	2019			Yes
RBTF: Tank 830	SWMU 14	-	N/A	N/A	N/A	N/A	N/A			No
Refinery: Tank 307	SWMU 15	-	N/A	N/A	N/A	N/A	N/A			Yes
Refinery: Storm Water System	SWMU 23	-	N/A	N/A	N/A	N/A	N/A			No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Dumpster (Cafeteria, Labs, Offices)	Misc. Container	301	1999	N/A	8 cy	0	Unknown	2010		No
WP: Dumpster (Machine Shops)	Misc. Container	302	1999	N/A	8 cy	0	Unknown	2010		No
WP: Dumpster (Evaporators)	Misc. Container	303	1999	N/A	6 cy	0	Unknown	2010		No
WP: Dumpster (Water Treatment Plant)	Misc. Container	304	1999	N/A	6 cy	0	Unknown	2010		No
WP: Dumpster (Carpenter Shop)	Misc. Container	305	1999	N/A	4 cy	0	Unknown	2010		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Dumpster (Storeroom)	Misc. Container	306	1999	N/A	8 cy	0	Unknown	2010		No
WP: Dumpster (Storeroom)	Misc. Container	307	1999	N/A	8 cy	0	Unknown	2010		No
WP: Dumpster (24 Machine Maint. Shops)	Misc. Container	308	1999	N/A	8 cy	0	Unknown	2010		No
WP: Dumpster (24 Machine)	Misc. Container	309	1999	N/A	6 cy	0	Unknown	2010		No
WP: Dumpster (Contractor Hill Dumpster)	Misc. Container	310	1999	N/A	8 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (24 Machine)	Misc. Container	311	1999	N/A	30 cy	0	Unknown	2010		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Roll-off Dumpster (24 Machine)	Misc. Container	312	1999	N/A	30 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (24 Machine)	Misc. Container	313	1999	N/A	30 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (24 Machine)	Misc. Container	314	1999	N/A	40 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (Mobile Shop)	Misc. Container	315	1999	N/A	30 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (Mobile Shop)	Misc. Container	316	1999	N/A	30 cy	0	Unknown	2010		No
WP: Roll-off Dumpster (Truck Staging Area)	Misc. Container	317	1999	N/A	30 cy	0	Unknown	2010		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Roll-off Dumpster (Storeroom Dumpster)	Misc. Container	318	1999	N/A	30 cy	0	Unknown	2010		No
WP: Salvage Yard Piles	Waste Pile (SWMU 16)	319	1999	N/A	-	0				Yes
WP: Waste Piles near Paint Shop	Waste Pile (SWMU 20)	320	1999	N/A	-	0	Unknown			Yes
WP: Container Storage Area	Container Storage Area	321	1999	N/A	-	0	Unknown	2010		No
WP: Container Storage Area*	Container Storage Area	322	1999	D001, D002, D018, D039, D040, F003, F005	-	0	Unknown	2010		No
WP: Enclosed Dumpsters for Asbestos Waste	Misc. Container	323	1999	N/A	40 cy	0	Unknown	2010		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Storage Area for Asbestos Containing Materials	Container Storage Area (SWMU 18)	324	1999	N/A	-	0	Unknown			No
WP: Safety-Kleen Parts Washer (Pump Shop)	Tank	325	1999	D001, D018, D039, D040	30 gal	0	Unknown	2010		No
WP: Safety-Kleen Parts Washer (Mobile Shop)	Tank	326	1999	D001, D018, D039, D040	30 gal	0	Unknown	2010		No
WP: Safety-Kleen Parts Washer (Mobile Shop)	Tank	327	1999	D001, D018, D039, D040	30 gal	0	Unknown	2010		No
WP: Landfill	Landfill	401	Unknown	-	-	-	-	Pre-2015	Pre-2015	No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Storage Area for Asbestos Containing Material	Container Storage Area (SWMU 18)	402	N/A	N/A	N/A	N/A	N/A	2015		No
WP: Container Storage Area (General Storeroom)*	Container Storage Area	403	Unknown	D001, D002, D003, F003, F005	Unknown	0	Unknown	2010		No
WP: Misc. Storage Container	Misc. Storage Container	404	Unknown	N/A	40 cy	0	Unknown	2008		No
WP: Misc. Storage Container*	Misc. Storage Container	405	Unknown	D001, D018, D039, D040	40 cy	0	Unknown	2010		No
WP: Trash Dumpsters	Misc. Storage Container	406	Unknown	N/A	Unknown	0	Unknown	2010		No
WP: Dumpster – Recaust Tank Bottoms	Misc. Storage Container	408	Unknown	N/A	Unknown	0	Unknown	2008		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Dumpster – Recaust Tank Bottoms*	Misc. Storage Container	409	Unknown	D002, D003	Unknown	0	Unknown	2010		No
WP: Misc. Storage Container*	Misc. Storage Container	410	Unknown	D001, D018, D039, D040	30 gal	0	Unknown	2010		No
WP: Misc. Storage Container*	Misc. Storage Container	411	Unknown	D001, D018, D039, D040	30 gal	0	Unknown	2010		Yes
WP: Misc. Storage Container	Misc. Storage Container	412	Unknown	D001, D018, D039, D040	30 gal	0	Unknown	2010		No
WP: Mill Wide Process Waste Water Collection System*	Neutralization only	413	Unknown	D002, D003	-	N/A	N/A	N/A		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Paint Storage Room*	Container Storage Area (SWMU 22)	414	Unknown	D001, F003, F005	-	0	Unknown	2010		Yes
WP: Container Storage Area	Container Storage Area	415	Unknown	N/A	-	0	Unknown	2010		No
WP: Misc. Storage Container	Misc. Storage Container	416	Unknown	N/A	40 cy	0	Unknown	2008		No
WP: Incinerator	Incinerator (SWMU 19)	417	Unknown	N/A	-	0	Unknown			Yes
WP: Wood Waste Pile and Dumpsters	Container Storage Area	418	Unknown	N/A	-	0	2006	2008		No
WP: Dumpsters (Paper Machine)	Misc. Storage Container	419	Unknown	N/A	-	0	Unknown	2008		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Dumpsters (Mobile Shop)	Misc. Storage Container	420	Unknown	N/A	-	0	Unknown	2008		No
WP: Dumpsters (Salvage Yard)	Misc. Storage Container	421	Unknown	N/A	-	0	Unknown	2008		No
WP: Dumpsters (Cafeteria & General Office)	Misc. Storage Container	422	Unknown	N/A	-	0	Unknown	2008		No
WP: Turnaround /Outage Dumpsters	Misc. Storage Container	423	Unknown	N/A	-	0	Unknown	2008		No
WP: Salvage Yard Piles	Misc. Storage Container (SWMU 16)	424	Unknown	N/A	-	0	Unknown			Yes
WP: Dumpsters (Paint Shop)	Misc. Container	425	Unknown	N/A	-	0	Unknown	2008		No

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Waste Piles Near Paint Shop	Waste Pile (SWMU 20)	426	Unknown	N/A	-	0	Unknown			Yes
WP: Abandoned Cooling Tower Basin	Waste Pile (SWMU 17)	427	N/A	N/A	N/A	0	N/A			No
WP: Main Sewer Dump Station	Discharge to Sewer/POTW or NPDES	428	Unknown	N/A	-	0	Unknown	2010		No
WP: Maintenance Shop Dumpsters	Misc. Container	429	Unknown	N/A	-	0	Unknown	2008		No
WP: Storeroom Dumpsters	Misc. Container	430	Unknown	N/A	-	0	Unknown	2008		No
Areas of Concern (AOCs)										
Refinery: Groundwater Region 7	AOC 10	-	N/A	N/A	N/A	N/A	N/A			Yes

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
Refinery: Groundwater Regions 1, 2, 3, 4, 5, and 6	AOC 11	-	N/A	N/A	N/A	N/A	N/A			Yes
WP: West Property Groundwater PMZ	AOC 21	-	N/A	N/A	N/A	N/A	N/A			Yes
RBTF: Historical Tank Footprint	AOC 24	-	N/A	N/A	N/A	N/A	N/A			Unknown
RBTF: Abovegroun d Piping	AOC 25	-	N/A	N/A	N/A	N/A	N/A			Yes
RBTF: Former Truck Loading Terminal	AOC 26	-	N/A	N/A	N/A	N/A	N/A			Unknown
RBTF: City of Pasadena Laydown Storage Yard	AOC 27	-	N/A	N/A	N/A	N/A	N/A			Unknown

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
WP: Aboveground Tanks and Surface Conveyance Feature	AOC 28	-	N/A	N/A	N/A	N/A	N/A			Unknown
WP: Former Roof Shingle Production Area	AOC 29	-	N/A	N/A	N/A	N/A	N/A			Unknown
SP: Fuel Storage Tanks	AOC 30	-	N/A	N/A	N/A	N/A	N/A			Unknown
SP: Former Concrete Batch Plant Equipment	AOC 31	-	N/A	N/A	N/A	N/A	N/A			Unknown
SP: Former Pond 1	AOC 32	-	N/A	N/A	N/A	N/A	N/A			Unknown
SP: Former Pond 2	AOC 33	-	N/A	N/A	N/A	N/A	N/A			Unknown

Name of Waste Management Unit(1)	Type of Waste Management Unit	Notice of Registration Unit Number	Date Waste Was *First* Placed in Unit	EPA Waste Code	Estimated Capacity of Unit	Quantity of Waste Left in Place	Date Waste Was Last Placed in Unit(2)	Date of Unit Closure Or Projected Closure	Date Unit Certified Closed(3)	Is There Evidence of a Release of Hazardous Constituent(s)(4) to Groundwater? (Yes, No, or Unknown)
SP: Former Pond 3	AOC 34	-	N/A	N/A	N/A	N/A	N/A			Unknown
SP: Equipment Washdown Pad and Sump	AOC 35	-	N/A	N/A	N/A	N/A	N/A			Unknown

1 Indicate by asterisk (*) those waste management units that have received any hazardous waste constituent listed in Appendix VIII of 40 CFR Part 261.
2 For the purposes of this Compliance Plan Application, a waste management unit receiving hazardous waste after July 26, 1982 shall be considered a Regulated Unit. A waste management unit that ceased receiving hazardous waste on or before that date shall be considered a Solid Waste Management Unit (SWMU).
3 Date the applicant submitted certification of closure to the Commission.
4 Hazardous constituents are those hazardous constituents listed in Appendix IX of 40 CFR Part 264.

Table XI.E. -General Information

Waste Management Area/Units Description	N.O.R Unit No. (as applicable)	Compliance Period For WMA Year(s) [1] [2]
Moat	001	12
Stormwater Pond	002	19
Bauxite Pond	007	45

1. (The compliance period is the number of years equal to the active life of the waste management area as defined in 30 TAC 335.162).
2. In instances where the compliance period is equal to or exceeds 30 years, the maximum amount of financial assurance required will be based on 30 years because the required post-closure care period to perform corrective action and groundwater monitoring is 30 years. In instances where the compliance period is less than 30 years, the financial assurance for corrective action or compliance monitoring will be based on the longest time frame established by one of the following criteria:
    a. the duration of your compliance plan;
    b. the time frame for clean-up based on model projections and historical data as approved by the Executive Director; or
    c. the compliance period for the unit/area.

Table I.1-Description of Proposed Application Changes

Permit/Compliance Plan Application Appendix/Section	Brief Description of Proposed Change	Modification or Amendment Type	Supporting Regulatory Citation
Table I	Updated facility contacts	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix III.D	Provided revised inspection checklist	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix III.E	Provided Contingency Plan Summary; updated Tables III.E.1, III.E.2, III.E.3	Renewal and minor amendment	30 TAC 305.62(c)(2)
Table IV.B and Table V.D.1	Added footnote	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix VI	Added West Property information to Geology Report	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix VII	Updated closure cost estimate for stormwater pond and post-closure cost estimates for all units	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix VII.A	In Stormwater Pond Closure Plan, added footnote to Section 3.3.5.2 to allow for equivalent liner material	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix IX	Updated Preliminary Review Facility Checklist and Preliminary Review Unit Checklists with information for West Property and South Property	Renewal and minor amendment	30 TAC 305.62(c)(2)
Section XI	Added West Property PMZ to Compliance Plan	Renewal and minor amendment	30 TAC 305.62(c)(2)

Permit/Compliance Plan Application Appendix/Section	Brief Description of Proposed Change	Modification or Amendment Type	Supporting Regulatory Citation
Appendix XI	Updated Table XI.A.1. with information for West Property; provided new and updated CP Attachment A sheets 1-10	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix XI.D.6	Added West Property Groundwater RAP	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix XI.E	Updated financial assurance cost estimate for corrective action	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix XI-CP Tables	Updated CP Tables I, III, IIIA, and V to include West Property PMZ	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix XI-CP Tables	Updated CP Table II with new AOCs for West Property, South Property, and Red Bluff Tank Farm	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix XI-CP Tables	Request to submit an annual report by January 21st of each year to document the groundwater monitoring results for the site's Compliance Monitoring and Corrective Action Monitoring Programs.	Renewal and minor amendment	30 TAC 305.62(c)(2)
Appendix XI-CP Tables	Request change from semi-annual to annual monitoring for the Moat WMU.	Renewal and minor amendment	30 TAC 305.62(c)(2)

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
West Property		
1. Annual Sampling and Analysis Cost:		
A. Background Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
B. Point of Compliance Wells		
(1) Number of wells	0	
2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
C. Recovery Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	0	
D. Corrective Action Observation Wells		
(1) Number of wells	17	
(2) Sample analysis cost per well	$525.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$17850.00	
E. Point of Exposure Wells		
(1) Number of wells	5	
(2) Sample analysis cost per well	$ 525.00	$/well
(3) Number of sampling events per year	2	/yr

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
(4) Sampling cost (1 x 2 x 3)	$5250.00	
F. Supplemental Wells		
(1) Number of wells	0	
(2) Sample analysis cost per well	$0.00	$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	$0.00	
G. Field Quality Control Sampling		
(1) Number of wells	3	
(2) Sample analysis cost per well	$525.00	$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	$3150.00	
H. Sampling Analysis Cost (1.A+1.B+1.C+1.D+1.E+1.G)	$26,250.00	
2. Sampling Labor Cost:		
A. Hours of sampling per well	2.5	hrs/well
B. Number of sampling technicians per well	1	/yr
C. Charge per hour	$80.00	$/hr
D. Total number of wells to be sampled annually		
E. Total number of wells sampled semi-annually	22	
F. Total number of wells sampled quarterly		
G. Total number of wells sampled monthly		
H. Total number of wells sampled per year (2D) + (2E x 2) + (2F x 4) + (2G x 12)	44	
I. Sampling Labor Cost (2A x 2B x 2C x 2H)	$8,800.00	
***Annual Groundwater Monitoring Cost**	$35,050.00	
3. Well Installation (typical cost):		
A. Monitor well installation cost per well	$0.00	$/well
B. Number of monitor wells to be installed	0	
C. Cost of monitor well system (A x B)	$0.00	
D. Recovery well installation cost per well	$0.00	$/well

Table XI.E.2.e - Groundwater Monitoring Cost Estimate		
E. Number of Recovery Wells to be installed	0	
F. Cost of Recovery well system (D x E)	$0.00	
***Total Well Installation Cost (3C + 3F)**	0	
4. Administrative Cost:		
A. Annual cost for record-keeping and report preparation	$10000	
***Annual Administrative Cost (4A)**	$10000	$
5. Inspection and Maintenance Cost for the Monitoring Program:		
A. Operator's time (hours) on-site for inspections and maintenance per year	50	$/hr
B. Charge or salary per hour	$50.00	$/hr
C. Annual cost of labor (4A x 4B)	$2500.00	$/hr
D. Replacement of parts and equipment per year	$150.00	$/hr
***Annual Inspections / Maintenance Cost for the Groundwater Monitoring Program (5C + 5D)**	$2650.00	

Table XI.E.3. - Financial Assurance Summary

West Property Task	Cost
Annual Off-Site Liquid Treatment / Disposal Cost	
Annual On-Site Treatment / Disposal Cost	
Annual Inspection / Maintenance / Operation Cost For The Corrective Action Program	
Annual Groundwater Monitoring Cost	$35050.00
Annual Administrative Cost	$10000.00
Annual Inspection And Maintenance Cost For The Groundwater Monitoring Program	$2650.00
Annual Sub Total	**$47700.00**
Total Years Used For Calculating Financial Assurance for Corrective Action and/or Compliance Monitoring Program	**30** Years
Remediation Cost (Annual Sub Total x Total Years Used)	$1431000.00
On-Site Waste Water Treatment System Capital Cost Total Well Cost	
10% Contingency	$143100.00
Total Cost	$1574100.00
Grand Total Cost (round to nearest $1000)	**$1574000.00**

Table XI.E.3. - Financial Assurance Summary

Total Costs for all areas subject to RCRA Corrective Action and Compliance Monitoring Programs	
Task	Cost
Annual Off-Site Liquid Treatment / Disposal Cost	$6100.00
Annual On-Site Treatment / Disposal Cost	
Annual Inspection / Maintenance / Operation Cost For The Corrective Action Program	$26500.00
Annual Groundwater Monitoring Cost	$82900.00
Annual Administrative Cost	$42000.00
Annual Inspection And Maintenance Cost For The Groundwater Monitoring Program	$6305.00
Annual Sub Total	**$163805.00**
Total Years Used For Calculating Financial Assurance for Corrective Action and/or Compliance Monitoring Program	**30** Years
Remediation Cost (Annual Sub Total x Total Years Used)	$4914150.00
On-Site Waste Water Treatment System Capital Cost Total Well Cost	
10% Contingency	$491415.00
Total Cost	$54055665.00
Grand Total Cost (round to nearest $1000)	**$5406000.00**

AECOM
248 Chapman Road
Suite 101
Newark, DE 19702
USA
aecom.com

October 31, 2024

Michael O'Malley, License & Permit Specialist
Business & Program Services Section
Waste Permits Division
Texas Commission on Environmental Quality (TCEQ)
12100 Park 35 Circle, Bldg D
Austin, TX 78753

Response to Comments RE: Administrative Notice of Deficiency Letter Pasadena Refining System, Inc. – Pasadena Refining System PRSI Pasadena, Harris County, Texas Hazardous Waste Permit Number: 50112 Industrial Solid Waste Number: 30311; RN100716661/CN603137605 Permit Renewal with Minor Amendment Tracking No. 30191241

Dear Mr. O'Malley:

On October 17, 2024, Pasadena Refining System, Inc. received TCEQ's comments for the administrative review of the permit renewal application submitted on October 3, 2024. Below you will find the Agency comments followed by our responses.

C1; Comment: In accordance with Texas Water Code §5.1734, relating to Electronic Posting of Permit Applications (Senate Bill 1397, 88th Legislative Session, Regular Session, 2023), you must submit a complete electronic version of the permit application with all revisions included for posting on the TCEQ Website. ***The required NORI documents will not be released until the complete electronic version of the application is received.***

> **Response:** Understood. PRSI will submit a complete electronic version of the permit application with all revisions included upon receiving declaration of administrative completeness, as noted on page 1 of the Administrative Notice of Deficiency letter dated October 17, 2024.

A1; Omitted: Applicants who are applying for a new registration, permit, or activity, or who are making certain types of changes to an existing registration, permit, or activity, are required to complete a Public Involvement Plan. Public Involvement Plan Form (TCEQ-20960) Instructions for Completing a Public Involvement Plan Form for Permit and Registration Applications (TCEQ-20960/ins). Visit our website to learn about TCEQ's Public Participation Plan. For questions, please email [redacted]

> **Response:** While preparing the permit renewal application, PRSI reviewed the Public Involvement Plan form (TCEQ-20960) and instructions. The application is not for a new permit or registration and is not for addition of a previously unpermitted type of waste management unit, addition of a new waste stream requiring new waste management practices, or addition of a Compliance Plan or Corrective Action Program. Therefore, in accordance with Section 1 of the form (Preliminary Screening), the form is not required and was not submitted as part of the renewal application.

A2; A; Section I; A, Page 15; Incorrect: Please verify: TCEQ's Central Registry shows the Facility name as being "Pasadena Refining System PRSI".

Response: Page 15 of the application has been updated with Pasadena Refining System PRSI as the facility name.

A3; A; Section I; C, Page 16; Incorrect: Please verify: TCEQ's Central Registry shows the Operator Name as being "Pasadena Refining System, Inc."

Response: The correct operator name is Pasadena Refining System, Inc. Page 16 of the application has been updated to remove "(PRSI)".

A4, B, Table I, A, Page 286, Incorrect: Regulated Entity Name: Central Registry listed the RN name as Pasadena Refining Systems PRSI.

Response: Page 286 of the application has been updated as instructed.

A5; B; Table I; B, Page 286; Typo: Checking the box same "as Facility Operator?", leave the information below blank.

Response: Page 286 of the application has been updated as instructed. All pages of Table I, General Information have been updated with a new revision date (pages 286 through 291 of the application).

A6; B; Table I; G, Page 290; Omitted: Please provide the email address for the Mayor of Pasadena Jeff A. Wagner. The information is required to complete the Office of Chief Clerk's public notice process.

Response: Page 290 of the application has been updated as instructed.

A7; B; Table I; G, Page 290; Omitted: Please provide the email address for the City of Pasadena Health Kathy Perez-Ashton. The information is required to complete the Office of Chief Clerk's public notice process.

Response: Page 290 of the application has been updated as instructed.

A8; B; Table I; G, Page 290; Omitted: Please provide the email address for Harris County Judge Lina Hildago. The information is required to complete the Office of Chief Clerk's public notice process.

Response: Page 290 of the application has been updated as instructed.

A9; B; Table I; G, Page 290; Incorrect: County Health Authority, Harris County Health Department Interim Executive Director is Leah Barton. Please verify address and an email address is required. The information is required to complete the Office of Chief Clerk's public notice process.

Response: Ms. Barton's address has been verified and page 290 of the application has been updated as instructed.

A10; B; Core Data Form; Section II, Box 4; Omitted: Please select the correct customer information i.e., New Customer or Update to Customer Information.

Response: Consistent with information provided by Srinath Venkat on September 16, 2024, this box was not completed because no information has changed since the last Core Data Form was submitted. To avoid confusion, the information provided in this section with the original application has been deleted.

A11; B; Core Data Form; Section II, Box 5; Omitted: Please enter the date the Core Data Form was updated.

Response: This box was not completed because no information has changed since the last Core Data Form was submitted. To avoid confusion, the information provided in this section with the original application has been deleted.

A12; B; Core Data Form; Section II, Box 6; Incorrect: Customer Legal name listed in Central Registry is "Pasadena Refining Systems, Inc." remove (PRSI).

Response: Page 295 of the application has been updated as instructed.

A13; B; Core Data Form; Section III, Box 22; Incorrect: The Regulated Entity Name listed in Central Registry and the Chief Clerk's database is "Pasadena Refining System PRSI".

Response: Page 296 of the application has been updated as instructed.

A14; B; Core Data Form; Section III, Box 39; Incomplete: List the Programs and Additional ID number(s) linked to the Regulated Entity. If there are more Additional ID numbers than space available, list them on a separate sheet and attach it to the TCEQ Core Data Form.

Response: In compliance with the Core Data Form instructions, only the program, permit, and registration number affected by the updates submitted on the form are included in this section. In the original application, the site EPA ID number, Industrial and Hazardous Waste permit number, and registration number are included for reference only. To avoid confusion, the information provided in this section with the original application has been deleted.

A15; B; Appendix V.A; Maps, pages 388-389; Incorrect: The topographic maps listed need to be in a scale of 1-inch equal to not more than 200 feet, showing the facility boundary and a distance of 1,000 feet around the facility. Please update the map or label the map scale as an "scale is approximate".

Response: The maps shown on pages 388 and 389 of the permit renewal application have been updated with a label noting that map scales are approximate.

If you have any questions, please contact me at [redacted] or 302-781-6060.

Sincerely,

AECOM

Maureen McBride

Maureen McBride
SME – Green and Sustainable Remediation
Environmental Compliance

Attachments

New Signature Pages

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
☐ 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:	Maureen McBride	41. Title:	Environmental Compliance

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(302) 781-6060		( ) -	[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:	Pasadena Refining System, Inc. (PRSI)	Job Title:	General Manager
Name *(In Print)*:	Tifanie Steele	Phone:	(713) 472- 2461
Signature:	Tifanie Steele	Date:	10 / 30 / 2024

Signature Page

I, Tifanie Steele, GM, Pasadena Refinery, Chevron
(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: Tifanie Steele Date: 10/30/2024

- - - -

Pages 15 through 16

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: Pasadena Refining System~~, Inc.~~ PRSI

(Individual, Corporation, or Other Legal Entity Name)

TCEQ Solid Waste Registration No: 30311 EPA I.D. No.: TXD008091290

Street Address (If Available): 111 Red Bluff Road

City: Pasadena, State TX Zip Code 77506-1530

County: Harris

Telephone Number: 713-472-4051 Charter Number: 800690220

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.

Joe Ebert
HSE Manager
111 Red Bluff Road
Pasadena, TX 77506-1530
713-804-9109
[redacted]
May represent the applicant in all matters

Steph Seewald
Environmental Manager
111 Red Bluff Road
Pasadena, TX 77506-1530
713-804-9109
[redacted]
May represent the applicant in all matters

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.

Corporation Service Company d/b/a
CSC – Lawyers Incorporating Service Company
211 East 7th Street, Suite 620
Austin, Texas 78701-3218

C. Operator[1]: Identify the entity who will conduct facility operations.

Operator Name: Pasadena Refining System, Inc. ~~(PRSI)~~

Address: 111 Red Bluff Road

City: Pasadena, State: TX Zip Code: 77506-1530

Telephone Number: 713-472-4051 Charter Number: 800690220

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: _____

Address: _____

City: _____, State: _____ Zip Code: _____

Telephone Number: _____

[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].

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: Pasadena Refining System PRSI

(Individual, Corporation, or Other Legal Entity Name)

TCEQ Solid Waste Registration No: 30311 EPA I.D. No.: TXD008091290

Street Address (If Available): 111 Red Bluff Road

City: Pasadena, State TX Zip Code 77506-1530

County: Harris

Telephone Number: 713-472-4051 Charter Number: 800690220

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.

Joe Ebert
HSE Manager
111 Red Bluff Road
Pasadena, TX 77506-1530
713-804-9109
[redacted]
May represent the applicant in all matters

Steph Seewald
Environmental Manager
111 Red Bluff Road
Pasadena, TX 77506-1530
713-804-9109
[redacted]
May represent the applicant in all matters

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.

Corporation Service Company d/b/a
CSC – Lawyers Incorporating Service Company
211 East 7th Street, Suite 620
Austin, Texas 78701-3218

C. Operator[1]: Identify the entity who will conduct facility operations.

Operator Name: Pasadena Refining System, Inc.

Address: 111 Red Bluff Road

City: Pasadena, State: TX Zip Code: 77506-1530

Telephone Number: 713-472-4051 Charter Number: 800690220

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: _____

Address: _____

City: _____, State: _____ Zip Code: _____

Telephone Number: _____

[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].

Pages 286 through 291

Table I: General Information

A. Applicant: Facility Operator (or Facility Owner & Operator, if same)

Name[1]	Pasadena Refining System, Inc.
Address	111 Red Bluff Road
City, State	Pasadena, TX
Zip Code	77506-1530
Telephone Number	713-472-2461; press 0 and request site permit contact
Alternate Telephone Number	
Fax:	
TCEQ Solid Waste Registration No.	30311
EPA I.D. No.	TXD008091290
Permit No.	50112
County	Harris
Regulated Entity Name	Pasadena Refining System PRSI
Regulated Entity Reference Number (RN)	RN100716661
Customer Name	Pasadena Refining System, Inc.
Customer Reference Number:	CN603137605
Charter Number[2]	800690220
Previous or Former Names of the Facility (if applicable)	Crown Central Petroleum Corporation

B. Facility Owner: Identify the Facility Owner if different than the Facility Operator[3]

☒ Same as Facility Operator?

Name	~~Pasadena Refining System, Inc.~~
Address	~~111 Red Bluff Road~~
City, State	~~Pasadena, TX~~
Zip Code	~~77506-1530~~
Telephone Number	~~713-472-2461~~
Alternate Telephone Number	
Fax:	

C. Facility Contact

1. Persons or firms who will act as primary contact:

Name, Title:	Joe Ebert, HSE Manager
Address	111 Red Bluff Road
City, State:	Pasadena, Texas
Zip Code	77506-1530
Telephone Number	713-472-2461; press 0 and request site permit contact
Alternate Telephone Number	
E-mail	[redacted]
Fax:	

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

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

Remove Last Primary Contact Fields | Add Additional Primary Contact Fields

2. Agent in Service or Agent of Service (if you are an out-of-state company)[4]:

Name, Title:	CSC – Lawyers Incorporating Service Company
Address	211 East 7th Street, Suite 620
City, State:	Austin, TX
Zip Code	78701-3218

3. Individual responsible for causing notice to be published:

Name:	Joe Ebert, HSE Manager
Address	111 Red Bluff Road
City, State:	Pasadena, Texas
Zip Code	77506-1530
Telephone Number	713-472-2461
Alternate Telephone Number	
E-mail	[redacted]
Fax:	

4. Public place in county where application will be made available[5]:

Name	Pasadena Public Library Central Branch
Address	1201 Jeff Ginn Memorial Dr
City, State	Pasadena, TX

Zip Code 77506

D. Application Type and Facility Status

1. Application Type

- ☒ Permit
- ☐ New
- ☐ Interim status
- ☒ Renewal
- ☐ RD&D
- ☒ Compliance Plan
- ☐ Amendment
- ☐ Major
- ☐ Minor
- ☐ Modification
- ☐ Class 3
- ☐ Class 2
- ☐ Class 1[1]
- ☐ Class 1

2. Part of a Consolidated Permit Processing request? [30 TAC Chapter 33] No

3. Does the application contain confidential material?[6] No

4. Facility Status. Check all that apply

- ☐ Proposed
- ☒ Existing
- ☒ On-Site
- ☐ Off-Site
- ☐ Commercial
- ☐ Recycle
- ☐ Land Disposal
- ☐ Areal or capacity expansion
- ☒ Compliance plan

5. Is the facility within the Coastal Management Program boundary? **Yes**

6. Description of Application Changes

Complete Table I.1 - Description of Proposed Application Changes.

Note: List all changes requested in Table I.1. Unlisted requests risk remaining unaddressed or possibly denied if brought to the permit application reviewer's attention at a later time.

7. Total acreage of the facility being permitted: 462

8. Identify the name of the drainage basin and segment where the facility is located

River Segment 1006

River Basin San Jacinto River Basin

E. Facility Siting Summary:

Is the facility located or proposed to be located:

1. Within a 100-year floodplain?	No
2. in wetlands?	No
3. In the critical habitat of an endangered species of plant or animal?	No
4. On the recharge zone of a sole-source aquifer?	No
5. In an area overlying a regional aquifer?	Yes
6. Within 0.5 mile (2,640 feet) of an established residence, church, school, day care center, surface water body used for a public drinking water supply, or dedicated public park?[7] [30 TAC 335.202] If Yes: the TCEQ shall not issue a permit for this facility.	Not applicable
7. In an area in which the governing body of the county or municipality has prohibited the processing or disposal of municipal hazardous waste or industrial solid waste? If Yes: provide a copy of the ordinance or order.	No

F. Wastewater and Stormwater Disposition

1. Is the disposal of any waste to be accomplished by a waste disposal well at this facility?	No
If Yes: List WDW Permit No(s):	
2. Will any point source discharge of effluent or rainfall runoff occur as a result of the proposed activities?	Yes

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

☒ Yes

TCEQ Permit No. WQ0000574000

TPDES Permit No.

☐ No

Date TCEQ discharge permit application filed

Date TPDES discharge permit application filed:

G. Information Required to Provide Notice

State Officials List [30 TAC 39]

State Senator	The Honorable Carol Alvarado Texas State Senate District 6 Capitol Address: P.O. Box 12068, Capitol Station, Austin, TX 78711 District Address: 4450 Harrisburg, Suite 436, Houston, TX 77011

State Representative	State Representative Mary Ann Perez State House District 144 Capitol Address: Room E2.406, P.O. Box 2910, Austin, TX 78768 District Address: 101 S. Richey Street, Ste. F107, Pasadena, Texas 77506

Local Officials List [30 TAC 39]

Mayor	Mayor Jeff A. Wagner [redacted] 1149 Ellsworth Pasadena, TX 77506
Local Health Authority	Kathy Perez-Ashton [redacted] P.O. Box 672 Pasadena, TX 77501
County Judge	Harris County Judge Lina Hidalgo [redacted] 1001 Preston, Suite 911 Houston, TX 77002
County Health Authority	Leah Barton [redacted] 1111 Fannin Street Houston, TX 77002

Based on the questions in the Bilingual Notice Instructions for this form, are you required to make alternate (Bilingual) notice for this application?	Yes
Bilingual Language(s):	Spanish
TCEQ Core Data Form Submitted?(see Section I Instructions, Item b.)	Yes
Has any information changed on the TCEQ Core Data Form since the last submittal?	No
Signature on Application Submitted? (see Section I Instructions, Item c)	Yes

1. Individual, Corporation, or Other Legal Entity Name - must match the Secretary of State's database records for the Facility)
2. 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.
3. The operator has the duty to submit an application if the facility is owned by one person and operated by another [30 TAC 305.43(b)]. The permit will specify the operator and the owner who is listed on Part A of this application [Section 361.087, Texas Health and Safety Code].
4. 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.

5. For applications for new permits, renewals, major amendments and Class 3 modifications a copy of the administratively complete application must be made available at a public place in the county where the facility is, or will be, located for review and copying by the public. Identify the public place in the county (e.g., public library, county court house, city hall), including the address, where the application will be made available for review and copying by the public.
6. For confidential information cross-reference the confidential material throughout the application to Section XIII: Confidential Material, and submit as a separate Section XIII document or binder conspicuously marked "CONFIDENTIAL".
7. Use only for a new commercial hazardous waste management facility or areal expansion of an existing commercial hazardous waste management facility or unit of that facility as defined in 30 TAC 335.202

Save Form Print Form

Table I: General Information

A. Applicant: Facility Operator (or Facility Owner & Operator, if same)

Name[1]	Pasadena Refining System, Inc.
Address	111 Red Bluff Road
City, State	Pasadena, TX
Zip Code	77506-1530
Telephone Number	713-472-2461; press 0 and request site permit contact
Alternate Telephone Number	
Fax:	
TCEQ Solid Waste Registration No.	30311
EPA I.D. No.	TXD008091290
Permit No.	50112
County	Harris
Regulated Entity Name	Pasadena Refining System, Inc.
Regulated Entity Reference Number (RN)	RN100716661
Customer Name	Pasadena Refining System PRSI
Customer Reference Number:	CN603137605
Charter Number[2]	800690220
Previous or Former Names of the Facility (if applicable)	Crown Central Petroleum Corporation

B. Facility Owner: Identify the Facility Owner if different than the Facility Operator[3]

☒ Same as Facility Operator?

Name	
Address	
City, State	
Zip Code	
Telephone Number	
Alternate Telephone Number	
Fax:	

C. Facility Contact

1. Persons or firms who will act as primary contact:

Name, Title:	Joe Ebert, HSE Manager
Address	111 Red Bluff Road
City, State:	Pasadena, Texas
Zip Code	77506-1530
Telephone Number	713-472-2461; press 0 and request site permit contact
Alternate Telephone Number	
E-mail	[redacted]
Fax:	

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

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

Remove Last Primary Contact Fields | Add Additional Primary Contact Fields

2. Agent in Service or Agent of Service (if you are an out-of-state company)[4]:

Name, Title:	CSC – Lawyers Incorporating Service Company
Address	211 East 7th Street, Suite 620
City, State:	Austin, TX
Zip Code	78701-3218

3. Individual responsible for causing notice to be published:

Name:	Joe Ebert, HSE Manager
Address	111 Red Bluff Road
City, State:	Pasadena, Texas
Zip Code	77506-1530
Telephone Number	713-472-2461
Alternate Telephone Number	
E-mail	[redacted]
Fax:	

4. Public place in county where application will be made available[5]:

Name	Pasadena Public Library Central Branch
Address	1201 Jeff Ginn Memorial Dr
City, State	Pasadena, TX

Zip Code 77506

D. Application Type and Facility Status

1. Application Type

- ☒ Permit
- ☐ New
- ☐ Interim status
- ☒ Renewal
- ☐ RD&D
- ☒ Compliance Plan
- ☐ Amendment
- ☐ Major
- ☐ Minor
- ☐ Modification
- ☐ Class 3
- ☐ Class 2
- ☐ Class 1[1]
- ☐ Class 1

2. Part of a Consolidated Permit Processing request? [30 TAC Chapter 33] No

3. Does the application contain confidential material?[6] No

4. Facility Status. Check all that apply

- ☐ Proposed
- ☒ Existing
- ☒ On-Site
- ☐ Off-Site
- ☐ Commercial
- ☐ Recycle
- ☐ Land Disposal
- ☐ Areal or capacity expansion
- ☒ Compliance plan

5. Is the facility within the Coastal Management Program boundary? **Yes**

6. Description of Application Changes

Complete Table I.1 - Description of Proposed Application Changes.

Note: List all changes requested in Table I.1. Unlisted requests risk remaining unaddressed or possibly denied if brought to the permit application reviewer's attention at a later time.

7. Total acreage of the facility being permitted: 462

8. Identify the name of the drainage basin and segment where the facility is located

River Segment 1006

River Basin San Jacinto River Basin

E. Facility Siting Summary:

Is the facility located or proposed to be located:

1. Within a 100-year floodplain?	No
2. in wetlands?	No
3. In the critical habitat of an endangered species of plant or animal?	No
4. On the recharge zone of a sole-source aquifer?	No
5. In an area overlying a regional aquifer?	Yes
6. Within 0.5 mile (2,640 feet) of an established residence, church, school, day care center, surface water body used for a public drinking water supply, or dedicated public park?[7] [30 TAC 335.202] If Yes: the TCEQ shall not issue a permit for this facility.	Not applicable
7. In an area in which the governing body of the county or municipality has prohibited the processing or disposal of municipal hazardous waste or industrial solid waste? If Yes: provide a copy of the ordinance or order.	No

F. Wastewater and Stormwater Disposition

1. Is the disposal of any waste to be accomplished by a waste disposal well at this facility?	No
If Yes: List WDW Permit No(s):	
2. Will any point source discharge of effluent or rainfall runoff occur as a result of the proposed activities?	Yes

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

☒ Yes

TCEQ Permit No. WQ0000574000

TPDES Permit No.

☐ No

Date TCEQ discharge permit application filed

Date TPDES discharge permit application filed:

G. Information Required to Provide Notice

State Officials List [30 TAC 39]

State Senator	The Honorable Carol Alvarado Texas State Senate District 6 Capitol Address: P.O. Box 12068, Capitol Station, Austin, TX 78711 District Address: 4450 Harrisburg, Suite 436, Houston, TX 77011

State Representative	State Representative Mary Ann Perez State House District 144 Capitol Address: Room E2.406, P.O. Box 2910, Austin, TX 78768 District Address: 101 S. Richey Street, Ste. F107, Pasadena, Texas 77506

Local Officials List [30 TAC 39]

Mayor	Mayor Jeff A. Wagner [redacted] 1149 Ellsworth Pasadena, TX 77506
Local Health Authority	Kathy Perez-Ashton [redacted] P.O. Box 672 Pasadena, TX 77501
County Judge	Harris County Judge Lina Hidalgo [redacted] 1001 Preston, Suite 911 Houston, TX 77002
County Health Authority	Leah Barton [redacted] 1111 Fannin Street Houston, TX 77002

Based on the questions in the Bilingual Notice Instructions for this form, are you required to make alternate (Bilingual) notice for this application?	Yes
Bilingual Language(s):	Spanish
TCEQ Core Data Form Submitted?(see Section I Instructions, Item b.)	Yes
Has any information changed on the TCEQ Core Data Form since the last submittal?	No
Signature on Application Submitted? (see Section I Instructions, Item c)	Yes

1. Individual, Corporation, or Other Legal Entity Name - must match the Secretary of State's database records for the Facility)
2. 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.
3. The operator has the duty to submit an application if the facility is owned by one person and operated by another [30 TAC 305.43(b)]. The permit will specify the operator and the owner who is listed on Part A of this application [Section 361.087, Texas Health and Safety Code].
4. 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.

5. For applications for new permits, renewals, major amendments and Class 3 modifications a copy of the administratively complete application must be made available at a public place in the county where the facility is, or will be, located for review and copying by the public. Identify the public place in the county (e.g., public library, county court house, city hall), including the address, where the application will be made available for review and copying by the public.
6. For confidential information cross-reference the confidential material throughout the application to Section XIII: Confidential Material, and submit as a separate Section XIII document or binder conspicuously marked "CONFIDENTIAL".
7. Use only for a new commercial hazardous waste management facility or areal expansion of an existing commercial hazardous waste management facility or unit of that facility as defined in 30 TAC 335.202

Save Form Print Form

Pages 295 through 297

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 603137605		**RN 100716661**

SECTION II: Customer Information

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

☐ 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:*

Pasadena Refining System, Inc.

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
800690220	10615131587	61513158	

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
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant ☐ Other:

15. Mailing Address:	Pasadena Refining System, Inc. (PRSI)						
	111 Red Bluff Road						
	City	Pasadena	**State**	TX	**ZIP**	77506	**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)*

(713) 472-2461		( ) -

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.)*

Pasadena Refining System PRSI

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	111 Red Bluff Road							
	City	Pasadena	**State**	TX	**ZIP**	77056	**ZIP + 4**	
24. County								

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

25. Description to Physical Location:					
26. Nearest City			**State**		**Nearest ZIP Code**

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:	29.7241		**28. Longitude (W) In Decimal:**	95.2061	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

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)
2911		324110	

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

Petroleum Refining

34. Mailing Address:	**Pasadena Refining System, Inc. (PRSI)**							
	111 Red Bluff Road							
	City	**Pasadena**	**State**	**TX**	**ZIP**	**77056**	**ZIP + 4**	
35. E-Mail Address:	[redacted]							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(713) 472-2461		( ) -

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
				50112; SWR30311; EPA ID TX000809120
☐ 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:	Maureen McBride	**41. Title:**	Environmental Compliance

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(302 **)** 781-6060		**( ) -**	[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:	Pasadena Refining System, Inc. (PRSI)	**Job Title:**	General Manager
Name *(In Print):*	Tifanie Steele	**Phone:**	**(** 713 **)** 472- **2461**
Signature:		**Date:**	

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 603137605		**RN 100716661**

SECTION II: Customer Information

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

☐ 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:*

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

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
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant ☐ Other:

15. Mailing Address:

City		**State**		**ZIP**		**ZIP + 4**	

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

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

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.)*

Pasadena Refining System PRSI

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	111 Red Bluff Road							
	City	Pasadena	**State**	TX	**ZIP**	77056	**ZIP + 4**	
24. County								

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

25. Description to Physical Location:					
26. Nearest City			**State**		**Nearest ZIP Code**

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:	29.7241		**28. Longitude (W) In Decimal:**	95.2061	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

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)
2911		324110	

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

Petroleum Refining

34. Mailing Address:	**Pasadena Refining System, Inc. (PRSI)**							
	111 Red Bluff Road							
	City	**Pasadena**	**State**	**TX**	**ZIP**	**77056**	**ZIP + 4**	
35. E-Mail Address:	[redacted]							

36. Telephone Number	37. Extension or Code	38. Fax Number *(if applicable)*
(713) 472-2461		( ) -

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
☐ 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:	Maureen McBride	**41. Title:**	Environmental Compliance

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(302 **)** 781-6060		**( )** -	[redacted]

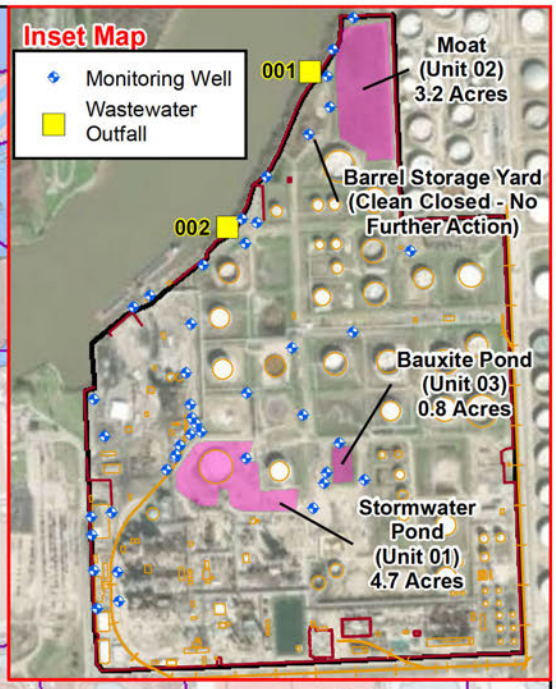
SECTION V: Authorized Signature

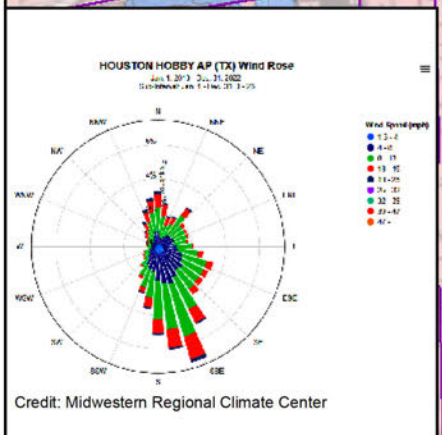
46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified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

Company:	Pasadena Refining System, Inc. (PRSI)	**Job Title:**	General Manager
Name *(In Print):*	Tifanie Steele	**Phone:**	**(** 713 **)** 472- **2461**
Signature:		**Date:**	

Pages 388 through 389

LULC Code	USGS LULC Classifications	LULC Code	USGS LULC Classifications
11	Residential	21	Cropland and Pasture
12	Commercial and Services	41	Deciduous Forest Land
13	Industrial	43	Mixed Forest Land
14	Transportation, Communications, and Utilities	51	Streams and Canals
16	Mixed Urban or Built-up Land.	53	Reservoirs
17	Other Urban or Built-up Land.	62	Nonforested Wetland





Credit: Midwestern Regional Climate Center

EDR SDRDB Report Wells
- Monitor
- Public Supply
- Industrial
- Test Well
- Other

Legend
- 1-Mile Radius Boundary
- USGS Land Use Land Cover

FEMA Flood Hazard Information
- Regulatory Floodway
- Special Flood Hazard Area
- 100-Year Floodplain
- Inactive Hazardous Waste Management Zone
- Fence
- Railroad Tracks
- Current Site Structure
- Site Boundary Line
- Details for this portion of the facility are shown on a separate map

Note:
Red Bluff Tank Farm Well Locations source: The EDR Radius Map Report, Inquiry Number 7139175.2s (October 05, 2022)
SDRDB = Submitted Drillers Reports Database
USA Topographic Map Sources: USGS

0 1,200 2,400
Feet
1 inch = 2,400 feet

SCALE IS APPROXIMATE. MAP FORMATTED FOR "A" (8.5" X 11") SIZE SHEET. SCALE NOT VALID FOR DIFFERENT PAGE SIZE.

AECOM
248 Chapman Road
Suite 101
Newark, DE 19702

PRSI, Inc. RCRA Permit
Pasadena, Texas

TOPOGRAPHIC MAP

TASK NUMBER:	PROJECT NUMBER:
1.2	60704290
DESIGNED BY: M. MCBRIDE	DATE: 9/17/2024
DRAWN BY: C. DUFFY	FIGURE NUMBER: V-B
DATA QUALITY CHECK BY: M. MCBRIDE	

LULC Code	USGS LULC Classifications	LULC Code	USGS LULC Classifications
11	Residential	21	Cropland and Pasture
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13	Industrial	43	Mixed Forest Land
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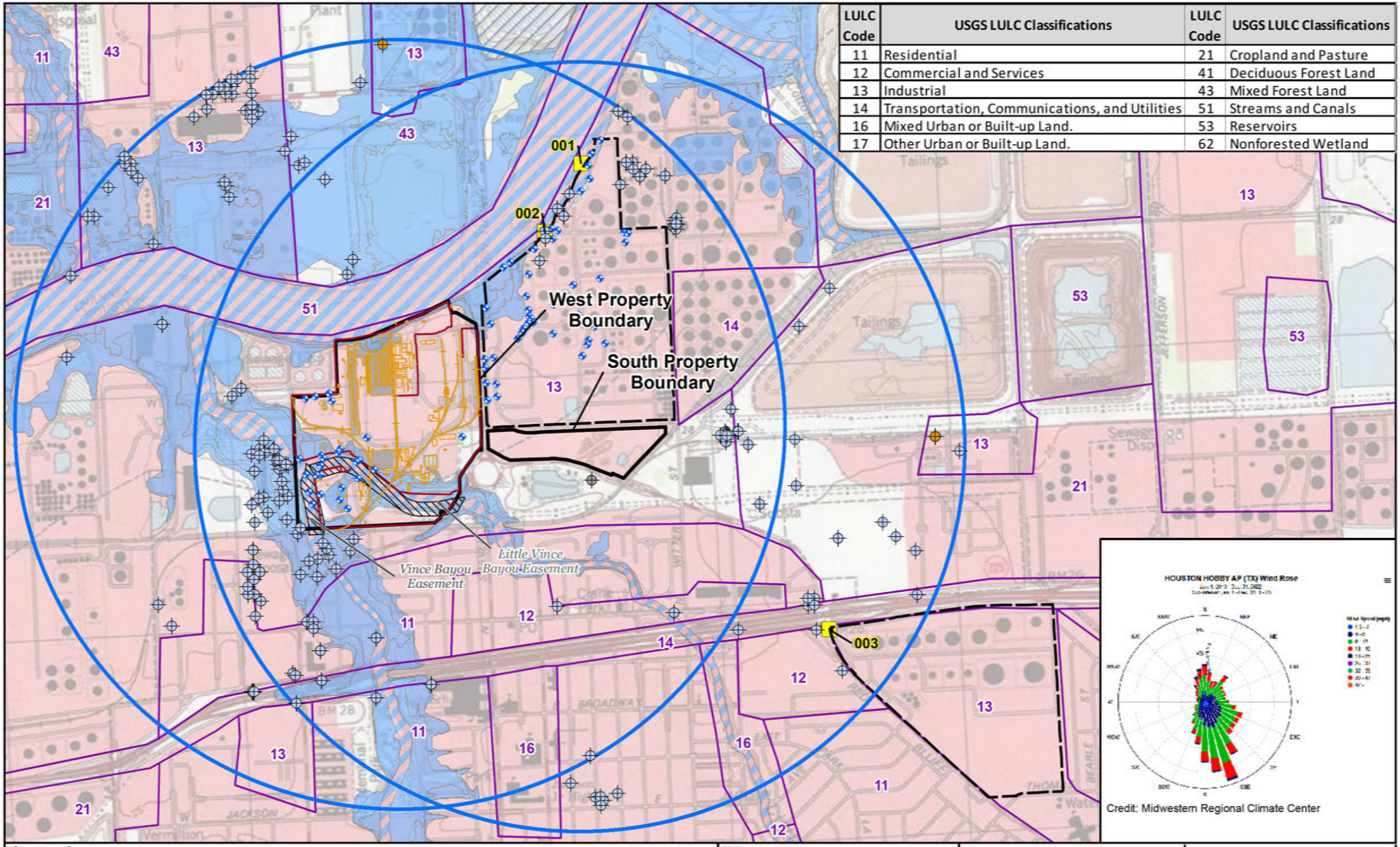

Legend

- 1-Mile Radius Boundary
- USGS Land Use Land Cover

FEMA Flood Hazard Information

- Regulatory Floodway
- Special Flood Hazard Area
- 100-Year Floodplain
- Fence
- Railroad Tracks
- Current Site Structure
- Property Site Boundary Line
- Details for this portion of the facility are shown on a separate map
- Tracts included in facility boundary for Corrective Action purposes only
- Wastewater Outfall
- PRSI Monitoring Well

TWDB SDRDB Report Wells

- Monitor
- Industrial
- Test Well
- Other

Note:
SDRDB Well Source: TWDB (as of 8/31/2023)
SDRDB = Submitted Drillers Reports Database
TWDB = Texas Water Development Board
USA Topographic Map Source: USGS

0 900 1,800
Feet
1 inch = 1,800 feet
Map Scale is Approximate. Formatted for 8.5 x 11 Sheet. Scale not valid for different page size.

AECOM
248 Chapman Road
Suite 101
Newark, DE 19702

PRSI RCRA Permit Modification – West and South Properties
Pasadena, Texas

TOPOGRAPHIC MAP - WEST AND SOUTH PROPERTIES

TASK NUMBER:	PROJECT NUMBER:
1.2	60704290
DESIGNED BY: M. MCBRIDE	DATE: 9/17/2024
DRAWN BY: C. DUFFY	FIGURE NUMBER: V-B
DATA QUALITY CHECK BY: M. MCBRIDE	

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: 9/25/2025

Name and Official Title (type or print): Alun Phillips, Facility 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 Alun Phillips on this 25th day of September, 2025.

My commission expires of the 20th day of October, 2027

VALERIE SEYBOLD
Notary Public, State of Texas
Comm. Expires 10-20-2027
Notary ID 128684379

_____
Notary Public in and for Harris County, Texas

Signature Page

I, Alun Phillips, Facility 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: 9/25/2025

- - - -