



**PERMIT RENEWAL APPLICATION  
HAZARDOUS WASTE PERMIT No. 50025**

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
PERMIT RENEWAL APPLICATION FOR A HAZARDOUS WASTE  
STORAGE, PROCESSING, AND DISPOSAL FACILITY**

**SOLID WASTE REGISTRATION NO. 30567**

**DATE: SEPTEMBER 6, 2024**

**PREPARED FOR:**

**VOPAK LOGISTICS SERVICES USA, INC.  
VOPAK LOGISTICS SERVICES USA DEER PARK  
2759 INDEPENDENCE PARKWAY SOUTH  
DEER PARK, TEXAS 77536**

**PREPARED BY:**

**ENGICON ENVIRONMENTAL, LLC.  
1717 WEST 34<sup>TH</sup> STREET, SUITE 600 # 120  
HOUSTON, TEXAS, 77018**



1717 West 34<sup>th</sup> Street, Suite 600 #120  
Houston, Texas 77018

September 6, 2024

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

**Subject: Permit Renewal Application  
Hazardous Waste Permit No. 50025  
Vopak Logistics Services USA, Inc.  
Vopak Logistics Services USA Deer Park  
2759 Independence Parkway South, Deer Park, Texas 77536  
CN 601527955 / RN 100223007**

To Whom it May Concern,

On behalf of Vopak Logistics Services USA, Inc, EngiCon Environmental, LLC (EngiCon) has prepared this Hazardous Waste Permit Renewal Application for the Vopak Logistics Services USA Deer Park facility located at 2759 Independence Parkway South, Deer Park, Harris County, Texas 77536. This is performed in accordance with Title 30 of the Texas Administrative Code (TAC) Chapter 335 Subchapter A Rule §335.2, and as required by the Texas Commission on Environmental Quality (TCEQ).

Please include Emile Hanna with EngiCon on all correspondence and as an additional Technical Contact to be able to respond to TCEQ questions and/or inquiries as part of the permit renewal application.

If you have any questions or if you require additional information regarding this submittal, please contact Mr. Emile Hanna with EngiCon Environmental LLC at (281) 910-9889 or [REDACTED]

Sincerely,

A handwritten signature in blue ink, appearing to read "Emile Hanna".

Emile C. Hanna, P.E.  
Principal  
EngiCon Environmental, LLC

Cc: Ms. Shelby Cole, Environmental Waste Specialist, Vopak Terminal Deer Park, Inc.

Enclosure: Hazardous Waste Permit Renewal Application and Supporting Documentation





# Texas Commission on Environmental Quality

## Waste Permits Division Correspondence

### Cover Sheet

Date: September 24, 2024

Facility Name: Vopak Logistics Services USA Deer Park

Permit or Registration No.: 50025

Nature of Correspondence:

☐ Initial/New

☒ Response/Revision to TCEQ Tracking No.:  
30098179 (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
<input type="checkbox"/> New Notice of Intent	<input type="checkbox"/> Alternative Daily Cover Report
<input type="checkbox"/> Notice of Intent Revision	<input type="checkbox"/> Closure Report
<input type="checkbox"/> New Permit (including Subchapter T)	<input type="checkbox"/> Compost Report
<input type="checkbox"/> New Registration (including Subchapter T)	<input type="checkbox"/> Groundwater Alternate Source Demonstration
<input type="checkbox"/> Major Amendment	<input type="checkbox"/> Groundwater Corrective Action
<input type="checkbox"/> Minor Amendment	<input type="checkbox"/> Groundwater Monitoring Report
<input type="checkbox"/> Limited Scope Major Amendment	<input type="checkbox"/> Groundwater Background Evaluation
<input type="checkbox"/> Notice Modification	<input type="checkbox"/> Landfill Gas Corrective Action
<input type="checkbox"/> Non-Notice Modification	<input type="checkbox"/> Landfill Gas Monitoring
<input type="checkbox"/> Transfer/Name Change Modification	<input type="checkbox"/> Liner Evaluation Report
<input type="checkbox"/> Temporary Authorization	<input type="checkbox"/> Soil Boring Plan
<input type="checkbox"/> Voluntary Revocation	<input type="checkbox"/> Special Waste Request
<input type="checkbox"/> Subchapter T Disturbance Non-Enclosed Structure	<input type="checkbox"/> Other:
<input type="checkbox"/> Other:	

**Table 2 - Industrial & Hazardous Waste Correspondence**

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

OCCIDENTAL CHEMICAL CORP  
ATTN TAX DEPT  
PO BOX 27570  
HOUSTON TX 77227-7570

INTERCONTINENTAL TERMINAL  
PO BOX 698  
DEER PARK TX 77536-0698

VALVOLINE OIL CO  
ATTN ASHLAND OIL INC  
PO BOX 55630  
LEXINGTON KY 40555-5630

GRP HOLDINGS LLC  
100 VALVOLINE WAY SUITE 200  
LEXINGTON KY 40509-2714

TM DEER PARK SERVICES LP  
PO BOX 1914  
DEER PARK TX 77536-1914

DSI TRANSPORTS INC  
ATTN G WEED  
PO BOX 3500  
CALGARY AB T29 2P9  
CANADA

ROBINSON PROPERTY HOLDINGS LLC  
C/O GP REAL ESTATE ADVISORS INC  
222 E CARRILLO ST STE 111  
SANTA BARBARA CA 93101-7148

GULF SOUTH INTERMODAL INC  
3433 HIGHWAY 190 PMB 316  
MANDEVILLE LA 70471-3101

STATE OF TEXAS  
PO BOX 1386  
HOUSTON TX 77251-1386

SAN JACINTO MUSEUM OF HISTORY  
1 MONUMENT CIR  
LA PORTE TX 77571-9585

TEXAS PARKS AND WILDLIFE DEPT  
4200 SMITH SCHOOL RD  
AUSTIN TX 78744-3218

COASTAL INDUSTRIAL WATER  
AUTHORITY  
1200 SMITH ST STE 2260  
HOUSTON TX 77002-4500



## **PERMIT RENEWAL APPLICATION HAZARDOUS WASTE PERMIT No. 50025**

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
PERMIT RENEWAL APPLICATION FOR A HAZARDOUS WASTE  
STORAGE, PROCESSING, AND DISPOSAL FACILITY**

**SOLID WASTE REGISTRATION NO. 30567**

**DATE: SEPTEMBER 6, 2024**



**PREPARED FOR:**

**VOPAK LOGISTICS SERVICES USA, INC.  
VOPAK LOGISTICS SERVICES USA DEER PARK  
2759 INDEPENDENCE PARKWAY SOUTH  
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1717 WEST 34<sup>TH</sup> STREET, SUITE 600 # 120  
HOUSTON, TEXAS, 77018**

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Vopak Logistics Services USA Deer Park  
2759 Independence Parkway South, Deer Park, Texas 77536

Hazardous Waste Permit No. 50025  
Hazardous Waste Permit Renewal Application

## **PLAIN LANGUAGE SUMMARY**



Texas Commission on Environmental Quality

# Plain Language Summary

## Industrial and Hazardous Waste Permit Applications

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

<b>Application Information</b>	
<b>Purpose of application:</b> <input type="checkbox"/> New <input checked="" type="checkbox"/> Renewal <input checked="" type="checkbox"/> Modification/Amendment	
<b>Date Submitted to TCEQ:</b> September 6, 2024	
<b>Customer Name:</b> Vopak Logistics Services USA, Inc.	
<b>Facility Name:</b> Vopak Logistics Services USA Deer Park	
<b>CN:</b> CN601527955	<b>RN:</b> RN100223007
<b>Permit Number:</b> 50025	<b>Solid Waste Registration Number:</b> 30567
<b>Facility Street Address:</b> 2759 Independence Parkway South, Deer Park, Texas 77536	
<b>Weblink to Street Address:</b> <a href="https://tceq.maps.arcgis.com/apps/webappviewer/index.html?id=db5bac44afbc468bbddd360f8168250f&amp;marker=-10585821.4079%2C3470339.3099%2C102100%2C%2C&amp;level=19">https://tceq.maps.arcgis.com/apps/webappviewer/index.html?id=db5bac44afbc468bbddd360f8168250f&amp;marker=-10585821.4079%2C3470339.3099%2C102100%2C%2C&amp;level=19</a>	
<b>Facility Information</b> (check all that apply)	
<b>What is the primary type of business?</b>	<input type="checkbox"/> Chemical manufacturing <input type="checkbox"/> Oil refinery <input checked="" type="checkbox"/> Treatment, storage or disposal facility <input type="checkbox"/> Other <b>If other, enter description:</b>
<b>What does the facility produce?</b>	<input type="checkbox"/> Chemicals <input type="checkbox"/> Fuels / lubricants <input checked="" type="checkbox"/> No products <input type="checkbox"/> Other <b>If other, enter description:</b>
<b>Waste Management Information</b> (check all that apply)	
<b>What types of wastes are managed?</b>	<input checked="" type="checkbox"/> Nonhazardous industrial <input checked="" type="checkbox"/> Hazardous <input type="checkbox"/> Other <b>If other, enter description:</b>
<b>Where does the waste come from?</b>	<input checked="" type="checkbox"/> Off-site source <input checked="" type="checkbox"/> On-site source
<b>How is the waste managed?</b>	<input checked="" type="checkbox"/> Storage <input checked="" type="checkbox"/> Process / Treatment <input checked="" type="checkbox"/> Disposal <input type="checkbox"/> Other <b>If other, enter description:</b>
<b>What type of units manage the waste?</b>	<input checked="" type="checkbox"/> Active <input type="checkbox"/> Post-Closure <b>Type and count:</b> Container Storage Areas = 2 Tanks and Tank Systems = 49
<b>What happens to waste managed at the facility?</b>	<input checked="" type="checkbox"/> Transported off-site <input checked="" type="checkbox"/> Disposed on-site <input type="checkbox"/> Other <b>If other, enter description:</b>



**Pollution Control Methods** *(check all that apply)***How will the facility prevent spills, leaks, and releases?**

- ☒ Routine inspections ☐ Engineered liner systems ☒ Spill containment  
☒ Proper waste handling ☐ Operations in enclosed buildings ☐ Groundwater monitoring  
☐ Other **If other, enter description:**

**How will the facility clean up spills, leaks, and releases?**

- ☒ Spill clean-up supplies ☒ Decontamination equipment  
☐ Other **If other, enter description:**

**How will the facility prevent / minimize air emissions?**

- ☒ Air monitoring / control systems ☐ Filters / scrubbers ☒ Routine inspections  
☒ Proper waste handling ☐ Operations in enclosed buildings  
☒ Other **If other, enter description:** Carbon Adsorption Systems

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

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

Minor Amendment: Updates and Corrections (no changes to permitted units).

**Clear Form**



# Resumen en Lenguaje Sencillo

## Solicitudes de Permisos de Desechos Industriales y Peligrosos

### Instrucciones

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

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

### Información de la Solicitud

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

**Sometido a TCEQ:** 6 de Septiembre de 2024

**Nombre del Cliente:** Vopak Logistics Services USA, Inc.

**Nombre de la Instalación:** Vopak Logistics Services USA Deer Park

**CN:** 601527955

**RN:**100223007

**Número de Permiso:**50025

**Número de Registro de Desechos Sólidos:** 30567

**Dirección de la Instalación:** 2759 Independence Parkway South, Deer Park, Texas 77536

#### Enlace Web a la Dirección Postal:

<https://tceq.maps.arcgis.com/apps/webappviewer/index.html?id=db5bac44afbc468bbddd360f8168250f&marker=-10585821.4079%2C3470339.3099%2C102100%2C%2C%2C&level=19>

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

**¿Cuál es el tipo principal de negocio?** ☐Planta de manufactura química ☐Refinería de aceite ☒Instalación de tratamiento, almacenamiento o eliminación

☐Otro **Si es otro, introduzca la descripción:** Introduzca la descripción

**¿Qué produce la instalación?** ☐Químicos ☐Combustibles / lubricantes ☒Sin productos

☐Otro **Si es otro, introduzca la descripción:** Introduzca la descripción

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

**¿Qué tipos de desechos se gestionan?** ☒Industrial no peligroso ☒Peligroso ☐Otro **Si es otro, introduzca la descripción:** Introduzca la descripción

**¿De dónde provienen los desechos?** ☒Fuente externa ☒Fuente interna

**¿Cómo se gestionan los desechos?** ☒Almacenar ☒Procesar / Tratar ☒Eliminación ☐Otro **Si es otro, introduzca la descripción:** Introduzca la descripción

¿Qué tipo de unidades gestionan los desechos?	<input checked="" type="checkbox"/> Activo <input type="checkbox"/> Postcierre <b>Teclee y cuente:</b> Tanques = 49, Áreas de almacenamiento de contenedores = 2
¿Qué sucede con los desechos gestionados en la instalación?	<input checked="" type="checkbox"/> Transportados fuera del sitio <input checked="" type="checkbox"/> Eliminado en el sitio <input type="checkbox"/> Otro <b>Si es otro, introduzca la descripción:</b> Introduzca la descripción

Métodos de Control de la Contaminación <i>(marque todos los que correspondan)</i>	
¿Cómo evitará la instalación derrames, fugas y liberaciones?	<input checked="" type="checkbox"/> Inspecciones de Rutina <input type="checkbox"/> Sistemas de revestimiento de ingeniería <input checked="" type="checkbox"/> Contención de derrames <input checked="" type="checkbox"/> Manejo adecuado de desechos <input type="checkbox"/> Operaciones en edificios cerrados <input type="checkbox"/> Monitoreo de aguas subterráneas <input type="checkbox"/> Otro <b>Si es otro, introduzca la descripción:</b> Introduzca la descripción
¿Cómo limpiará la instalación los derrames, fugas y liberaciones?	<input checked="" type="checkbox"/> Suministros de limpieza de derrames <input checked="" type="checkbox"/> Equipos de descontaminación <input type="checkbox"/> Otro <b>Si es otro, introduzca la descripción:</b> Introduzca la descripción
¿Cómo evitará / minimizará la instalación las emisiones atmosféricas?	<input checked="" type="checkbox"/> Sistemas de monitoreo / control de aire <input type="checkbox"/> Filtros / depuradores <input checked="" type="checkbox"/> Inspecciones de rutina <input checked="" type="checkbox"/> Manejo adecuado de desechos <input type="checkbox"/> Operaciones en edificios cerrados <input checked="" type="checkbox"/> Otro <b>Si es otro, introduzca la descripción:</b> Sistema de adsorción de carbono

Descripción de la Actualización <i>(solo para Modificaciones y Enmiendas de Clase 3)</i>
<p>Liste y explique cualquier cambio que esta modificación o enmienda haría a las dos secciones anteriores: <b>Información de Gestión de Desechos</b> y <b>Métodos de Control de la Contaminación</b>.          Enmienda menor: Actualizaciones y correcciones (sin cambios en las unidades permitidas).</p>

Vopak Logistics Services USA Deer Park  
2759 Independence Parkway South, Deer Park, Texas 77536

Hazardous Waste Permit No. 50025  
Hazardous Waste Permit Renewal Application

## **PUBLIC INVOLVEMENT PLAN**



Texas Commission on Environmental Quality

## Public Involvement Plan Form for Permit and Registration Applications

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

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

### Section 1. Preliminary Screening

New Permit or Registration Application

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

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

### Section 2. Secondary Screening

Requires public notice,

Considered to have significant public interest, and

Located within any of the following geographical locations:

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

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

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

### Section 3. Application Information

#### Type of Application (check all that apply):

Air      Initial      Federal      Amendment      Standard Permit      Title V  
Waste      Municipal Solid Waste      Industrial and Hazardous Waste      Scrap Tire  
                Radioactive Material Licensing      Underground Injection Control

#### Water Quality

Texas Pollutant Discharge Elimination System (TPDES)  
Texas Land Application Permit (TLAP)  
State Only Concentrated Animal Feeding Operation (CAFO)  
Water Treatment Plant Residuals Disposal Permit  
Class B Biosolids Land Application Permit  
Domestic Septage Land Application Registration

#### Water Rights New Permit

New Appropriation of Water  
New or existing reservoir

#### Amendment to an Existing Water Right

Add a New Appropriation of Water  
Add a New or Existing Reservoir  
Major Amendment that could affect other water rights or the environment

### Section 4. Plain Language Summary

Provide a brief description of planned activities.

## Section 5. Community and Demographic Information

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

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

(City)

(County)

(Census Tract)

Please indicate which of these three is the level used for gathering the following information.

City

County

Census Tract

- (a) Percent of people over 25 years of age who at least graduated from high school
- (b) Per capita income for population near the specified location
- (c) Percent of minority population and percent of population by race within the specified location
- (d) Percent of Linguistically Isolated Households by language within the specified location
- (e) Languages commonly spoken in area by percentage
- (f) Community and/or Stakeholder Groups
- (g) Historic public interest or involvement

## Section 6. Planned Public Outreach Activities

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

Yes      No

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

Yes      No

If Yes, please describe.

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

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

Yes      No

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

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

Publish in alternative language newspaper

Posted on Commissioner's Integrated Database Website

Mailed by TCEQ's Office of the Chief Clerk

Other (specify)

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

Yes      No

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

Yes      No

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

TCEQ Regional Office

TCEQ Central Office

Public Place (specify)

## Section 7. Voluntary Submittal

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

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

Yes      No

What types of notice will be provided?

Publish in alternative language newspaper

Posted on Commissioner's Integrated Database Website

Mailed by TCEQ's Office of the Chief Clerk

Other (specify)



Vopak Logistics Services USA Deer Park  
2759 Independence Parkway South, Deer Park, Texas 77536

Hazardous Waste Permit No. 50025  
Hazardous Waste Permit Renewal Application

## **PART A**



# **Texas Commission on Environmental Quality Instructions and Procedural Information for Filing a Permit Application for a Hazardous Waste Storage, Processing, or Disposal Facility**

## **Part A**

**[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](https://www.tceq.texas.gov/permitting/waste_permits/iHW_permits/iHW_permit_forms.html).

The number for this form is 0283. Questions may be e-mailed to [iHWper@tceq.texas.gov](mailto:iHWper@tceq.texas.gov).]

## **General Instructions**

1. A person (individual, corporation or other legal entity) who stores, processes or disposes of hazardous waste (except where such storage and/or processing is excluded from permit requirements in accordance with 30 Texas Administrative Code (TAC) Section 335.2) must obtain a permit pursuant to the Texas Health and Safety Code. In applying to the Texas Commission on Environmental Quality, hereafter referred to as the Commission, the applicant shall follow the procedures outlined below, on the application and in the Rules of the Commission.
2. The application (one original plus three (3) complete copies<sup>1</sup>) should be mailed to:

Texas Commission on Environmental Quality  
Attention: Waste Permits Division, MC126  
P. O. Box 13087  
Austin, Texas 78711-3087

**Note:** 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.

3. Signature on Application [30 TAC 305.44]. The application shall be signed by the owner and operator or by a duly authorized agent, employee, officer, or representative of the owner or operator and shall be verified before a notary public. When another person signs on behalf of the owner and operator, this person's title or relationship to the

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<sup>1</sup> The third copy may optionally consist of paper copies of all plans and maps and a computer diskette of the remaining document. The document should be formatted in Word processing software up to and including version 6.1 or a 100% compatible format. Files may be compressed using PKZIP Ver. 2 or a 100% compatible program.

owner or operator should be shown. In all cases, the person signing the form should be authorized to do so by the owner or operator (the Commission may require a person signing on behalf of an owner or operator to provide proof of authorization). An application submitted for a corporation must be signed by (or the signatory must be authorized by) a responsible corporate officer such as a president, secretary, treasurer, vice-president, or designated manager; or for a partnership or sole proprietorship, by a general partner or the proprietor, respectively. In the case of a municipal, state, federal, or other public facility, the application shall be signed by either a principal executive officer or ranking elected official.

4. An application will not be processed until all information required to properly evaluate the application has been obtained. When an application is severely lacking in detail and/or the applicant fails to submit additionally requested information in a timely manner, the application will not be considered to be "filed in accordance with the rules and regulations of the Commission."

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

#### 5. Fees and Costs

- a. The fee for filing an application is discussed in Section XII of Part B, form number TCEQ-0376.
- b. The applicant for a permit is required to bear the cost of publication of notice of the application in a newspaper as prescribed by 30 TAC Section 39.405(f).

6. A person may not commence operation of a hazardous waste management facility until the Commission has issued a permit to authorize the storage, processing, or disposal of hazardous waste, except with the approval of the Commission.

#### 7. 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, and submitted as a 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 and hazardous 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.

## **Part II**

### **Procedural Information**

After the submittal of Parts A and B of the application, the TCEQ will provide public notice of receipt of the application. The Executive Director's staff will review the application for completeness of information submitted. During the review, the applicant may be contacted for clarification or additional information. When all pertinent information is present, the application or a summary of its contents will be forwarded for review by other state agencies and local governmental entities interested in water quality control and solid waste management. After technical evaluation, opportunity for public hearing will be afforded.

Note that for facilities which had "commenced on-site storage, processing, or disposal of hazardous waste" [see 30 TAC Section 335.43(b)] on or before the date such waste is identified or listed as hazardous by EPA, the Texas Health and Safety Code provides in Section 361.082(f) that these facilities may continue to manage hazardous waste until such time as the Commission approves or denies the application, provided that the applicant has filed the permit application in accordance with the rules and regulations of the Commission.

The Commission may act upon an application for a permit, permit amendment, permit modification, or renewal of a permit without the necessity of holding a public hearing:

1. (a) When notice of the application has been mailed to persons possibly affected by the proposed permit; and  
  
(b) When notice has been published at least once in a newspaper regularly published or circulated within each county where the proposed facility is located; and  
  
(c) Within forty-five (45) days following publication of the Commission's notice, a Commissioner, the Executive Director or an affected person has not requested a public hearing; or
2. For a Class 1 or a Class 2 permit modification or a minor amendment to a permit. The Commission may, in certain cases, hold a public hearing for a Class 2 permit modification or a minor amendment.

A public hearing may be scheduled on an application for a RCRA hazardous waste permit when requested by a Commissioner, the Executive Director, or an affected person within forty-five (45) days following the newspaper publication.

#### **Requirements of Giving Notice of the Application:**

1. By the Applicant: Every applicant for a permit, permit amendment, permit modification, or permit renewal shall publish notice (see note below) of the application at least once in a newspaper regularly published or circulated within each county where the proposed facility is located. Where a public hearing has been requested, notice will be mailed to the applicant in ample time for publication, which shall be not less than thirty (30) days prior to the date set for the hearing. Except in the case of a notice of a permit modification request, the Commission will mail the appropriate notice and instructions for publication to the applicant.

NOTE: Additional publication and direct mail notice to affected persons will result if a public hearing is requested following newspaper publication of the notice of application. The cost of providing this additionally required publication and service of notice to affected persons will be assumed by the applicant.

2. By the Texas Commission on Environmental Quality: The Commission will mail notice of the application (except for permit modifications) to affected persons and certain governmental entities. The notice will be mailed at the same time instructions for newspaper publications are mailed to the applicant.
3. Bilingual Notice Instructions:

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

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

#### **Bilingual Notice Application Form:**

##### **Bilingual notice confirmation for this application:**

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

☒ YES ☐ NO

(If NO, alternative language notice publication not required)

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

☒ YES ☐ NO

(If YES to questions 1 and 2, alternative language publication is required; If NO to question 2, then consider the next question)

3. If YES to question 1, are there students enrolled at either the elementary school or the middle school nearest to the facility who attend a bilingual education program at another location?

☒ YES ☐ NO

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

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

☐ YES ☐ NO

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

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

Consideration of the Permit Application by the Commission:

The applicant will be notified by the Commission when the application is set for final consideration. If the Commission issues the permit, the applicant will be mailed a copy of the permit by the TCEQ Office of the Chief Clerk within one (1) month following Commission approval. (NOTE: Only one copy is mailed to the applicant and that copy will be sent to the official mailing address of the applicant as shown on the permit application form.)

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Vopak Logistics Services USA Deer Park  
2759 Independence Parkway South, Deer Park, Texas 77536

Hazardous Waste Permit No. 50025  
Hazardous Waste Permit Renewal Application

## **SECTION I – GENERAL INFORMATION**



**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: Vopak Logistics Services USA Deer Park

(Individual, Corporation, or Other Legal Entity Name)

TCEQ Solid Waste Registration No: 30567 EPA I.D. No.: TXD097673149

Street Address (If Available): 2759 Independence Parkway South

City: Deer Park, State: Texas, Zip Code: 77536

County: Harris

Telephone Number: (281) 604-6000 Charter Number: 0800119316

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.

Ms. Shelby Cole  
Environmental Waste Specialist  
2759 Independence Parkway South  
Deer Park, Texas 77536  
Phone: (281) 604-6042

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

Not Applicable.

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

Operator Name: Vopak Logistics Services USA, Inc.

Address: 2759 Independence Parkway South

City: Deer Park, State: Texas, Zip Code: 77536

Telephone Number: (281) 604-6000 Charter Number: 0800119316

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

## D. Owner

1. Indicate the ownership status of the facility:

a. Private X

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

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

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

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

☐ Yes ☒ No

If you checked "no",

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

Owner Name: Vopak Terminal Deer Park, Inc.

Address: 2759 Independence Parkway South

City: Deer Park, State: Texas, Zip Code: 77536

Telephone Number: (281) 604-6000

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

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

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

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

E. Type of Application Submittal:

Initial X - Renewal or Revision \_\_\_\_\_

## F. Registration and Permit Information

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

Relevant Program and/or Law	Permit No.	Agency*
1. Texas Solid Waste Disposal Act	<u>30567</u>	<u>TCEQ</u>
2. Wastewater disposal under the Texas Water Code	<u>WQ0001731000</u>	<u>TCEQ</u>
3. Underground injection under the Texas Water Code	<u>WDW 157 and 407</u>	<u>TCEQ</u>
4. Texas Clean Air Act	<u>87923</u>	<u>TCEQ</u>
5. Texas Uranium Surface Mining & Reclamation Act	<u>None</u>	_____
6. Texas Surface Coal Mining & Reclamation Act	<u>None</u>	_____
7. Hazardous Waste Management program under the Resource Conservation and Recovery Act	<u>50025</u>	<u>TCEQ</u>
8. UIC program under the Safe Drinking Water Act	<u>None</u>	_____
9. TPDES program under the Clean Water Act	<u>WQ0001731000</u>	<u>TCEQ</u>
10. PSD program under the Clean Air Act	<u>None</u>	_____
11. Nonattainment program under the Clean Air Act	<u>None</u>	_____
12. National Emission Standards for Hazardous Pollutants (NESHAP) Pre-construction approval under the Clean Air Act	<u>None</u>	_____
13. Ocean dumping permits under the Marine Protection Research and Sanctuaries Act	<u>None</u>	_____
14. Dredge or fill permits under section 404 of the Clean Water Act	<u>None</u>	_____
15. Other relevant environmental permits	<u>None</u>	_____

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

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

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

Vopak Logistics Services USA Deer Park provides storage, treatment, and disposal of waste generated by storage terminals cleaning operations, and other off-site industrial and municipal sources.

H. TCEQ Core Data Form

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

Attached.

### Signature Page

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

Operator Signature: [Signature] Date: 9-26-2024

Name and Official Title (type or print): Gustavo Nery, Site Director

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

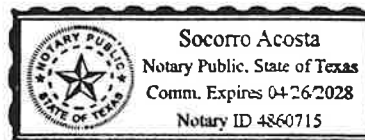
\_\_\_\_\_  
Signature

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

Subscribed and sworn to before me by the said Gustavo Nery on this  
26 day of September, 2024.

My commission expires of the 26 day of April, 2028

[Signature]  
Notary Public in and for Harris County, Texas



## **APPENDIX I**

### **GENERAL INFORMATION**

**APPENDIX I.D.2**  
**ATTACHMENT A – LEASE AGREEMENT**

## LEASE AGREEMENT

GROUND LEASE made as of the 9TH day of DEC, 2022, between Vopak Terminal Deer Park Inc., a Delaware corporation (hereinafter referred to as Landlord" and Vopak Industrial Services USA Inc., a Delaware corporation (hereinafter referred to as Tenant) with respect to the following facts:

### RECITALS

For the purposes of this Lease, the following terms shall have the following definitions:

1. Demised Premises shall mean the Buffer Zone and Railcar Cleaning Area and Contiguous Zone, and all easements, rights, rights-of-ways, and licenses thereto, but shall not include the Landlord's improvements or Tenant's trade fixtures, as set forth in the attached Exhibit "A" survey of Disposal Area and Exhibit "B" survey of Railcar Cleaning facility and Exhibit "C" survey and metes and bounds of the Contiguous Zone.
2. Improvements shall mean all buildings, structures, and improvements now existing or hereafter constructed upon the Land during the term of the Lease, and any restoration, addition to, or replacement thereof, but excluding therefrom the Land and Tenant's trade fixtures.
3. Land shall mean that certain parcel of real property described as Buffer Zone in Exhibit A attached hereto, and as Railcar Cleaning Area in Exhibit B and Contiguous Zone in Exhibit "C" but shall not mean the Landlord's improvements thereon or Tenant's trade fixtures therein.
4. Tenant's Trade Fixtures shall mean all of the following items located in, attached or affixed to, or used in connection with the Improvements, or the operation thereof, and located on the Land:
  - a) Tenant's pipelines and ancillary equipment
  - b) Tenant's Railcar Cleaning Equipment and Improvements

NOW, THEREFORE, Landlord and Tenant hereby agree as follows:

1. Demised Premises and Term. Landlord, in consideration of the rents hereinafter reserved and the terms, covenants, conditions, and agreements set forth in this Lease to be kept and performed by Tenant, does hereby demise and let unto Tenant, and Tenant does hereby hire and take from Landlord, the Demised Premises.

Subject to all matters affecting title to the Demised Premises on the date hereof;

TO HAVE AND TO HOLD the Demised Premises unto Tenant, its permitted successors and assigns, upon and subject to all of the terms, covenants, conditions, conditional limitations, and agreements herein contained for a term of years commencing on the date of this Lease and ending on December 31, 2022 (the Basic Term), or until said term is sooner terminated or extended pursuant to any of the conditional limitations or other provisions of this Lease.

2. Rental. Tenant hereby agrees to pay and Landlord hereby agrees to accept rent hereunder the following:
  - (i) From the date of this Lease, Tenant shall pay to Landlord the annual sum of \$1.00.



3. Title to Improvements and Trade Fixtures

- A. Title to Tenant's Trade Fixtures are and shall be the sole and exclusive property of Tenant during the term of this Lease and shall remain the sole and exclusive property of Tenant after the expiration or termination of this Lease, for whatever reason. Landlord acknowledges and understands that it shall have no right, title, or interest in or to Tenant's Trade Fixtures either during the term of this Lease, or thereafter (except as hereinafter provided).
- B. Landlord acknowledges and agrees that Tenant shall have the right to encumber, sell, or hypothecate tenant's Trade Fixtures, to remove them from the Demised Premises, or to otherwise deal with all or any portion of such Tenant's Trade Fixtures, at Tenant's sole discretion. Provided, further, that upon ten (10) days' prior written notice to Landlord, Landlord shall prepare and deliver to Tenant a certificate in recordable form stating that Landlord has no interest or right in or to Tenant's Trade Fixtures, as well as any other or further document which Tenant may reasonably request from Landlord.
- C. All Tenant Improvements presently on the Demised Premises and all Tenant Improvements hereafter constructed on the Demised Premises are and shall be the property of Tenant or any party taking title thereto through Tenant by means of mesne conveyance or foreclosure, during, and only during, the continuance of the term of this Lease and no longer. At all times during the term of this Lease, the Improvements which are owned by Tenant shall not be conveyed, transferred, or assigned unless such conveyance, transfer, or assignment shall be to a person, corporation or other entity to whom this Lease is being transferred, or assigned simultaneously therewith in compliance with the provisions of Article 9 hereof (Assignment; Subletting), and at all such times the holder of the leasehold interest of Tenant under this Lease shall be the owner of said Improvements.
- D. Notwithstanding anything to the contrary contained above, Landlord shall have the right, at its option, during the term of this Lease, to use the Improvements, and to the extent required, the Demised Premises, in any reasonable and lawful manner consistent with Landlord's business practices, including the right to operate, by itself or through third parties by means of sublease or license, any facility, concession, or franchise for the sale or rental of goods or services typical and customary in Landlord's business.

4. Repairs

Subject to the provisions of Articles 5 and 6 below, Tenant shall at all times during the term of this Lease, at Tenant's own costs and expense, keep the Demised Premises, except such portions as are exclusively operated by Landlord, in good order condition, and repair, ordinary wear and tear excepted, and in such condition as may be required by law whether or not such repair shall be interior or exterior, and whether or not such repair shall be of a structural nature, and whether or not the same can be said to be within the present contemplation of the parties hereto.

5. Compliance with Law

Tenant shall at all times during the term of the Lease, at Tenant's own cost and expense, perform and comply with all laws, rules, orders, ordinances, regulations, and requirements now or hereafter enacted or promulgated, of every governmental authority and municipality having jurisdiction over the Demised Premises, and of any agency thereof, relating to the Tenant's use of the Demised Premises, whether or not such laws, rules, orders, ordinances, regulations, or requirements so involved shall necessitate structural changes, improvements, interference with use and enjoyment of the Demised Premises, replacements, or repairs, extraordinary as well as ordinary, and Tenant shall so perform and comply, whether or not such laws, rules, orders, ordinances, regulations, or requirements shall now exist or shall hereafter be enacted or promulgated, and whether or not such laws, rules, orders, ordinances, regulations, or requirements can be said to be within the present contemplation of the parties hereto.

Tenant shall have the right, provided it does so with due diligence and dispatch, to contest by appropriate legal proceedings, without cost or expense to Landlord, the validity of any law, rule, order, ordinance, regulation, or requirement of the nature hereinabove referred to in this Article 5. Tenant may postpone compliance with such law, rule, order, ordinance, regulation, or requirement until the final determination of such proceedings, only so long as such postponement of compliance will not subject Landlord to any criminal prosecution, or any other liability of any kind against the reversion of the Demised Premises which may arise by reason of postponement or failure of compliance with such law rule, order, ordinance, regulation, or requirement if any sovereign, municipal, or other governmental authority shall threaten to carry out any work to comply with the same or to foreclose or sell any lien affecting all or any part of the Demised Premises which shall have arisen by reason of such postponement or failure of compliance.

6. Alterations

Tenant shall have the right, at Tenant's expense, from time to time during the term of this Lease to make any alteration, addition, or modification to the Demised Premises or the Tenant's improvements thereon.

7. Use of Demised Premises

Tenant may use and occupy the Demised Premises thereon for any lawful purposes.

8. Insurance

Tenant will at all times during the term of this Lease maintain insurance on the Demised Premises.

9. Assignment; Subletting

Tenant may assign this Lease or any interest herein at any time, or from time to time, at its discretion. No assignment shall be valid unless and until the assignor and the assignee of this Lease shall have delivered to Landlord a fully executed counterpart of the instrument of assignment executed by assignor and assignee. Any such assignment shall not be in violation of Article 3 hereof (Title to Improvements).

No acceptance by Landlord of any performance, rent, or additional rent herein provided to be done or paid by Tenant from any person, firm, or corporation other than Tenant, shall discharge Tenant (except to the extent of the performance

and payments so accepted by Landlord) from liability to pay all of rent herein provided to be paid by Tenant or from liability to perform any of the terms, covenants, conditions, and agreements set forth in this Lease.

10. Definition of Landlord

The term Landlord as used in this Lease shall at any given time mean the person or persons, corporation or corporations, or other entity or entities who are the owner or owners of the reversionary estate of Landlord in and to the Demised Premises. In the event of any conveyance or other divestiture of title to the reversionary estate of Landlord in and to the Demised Premises, the grantor or the person or persons, corporation or corporations, or other entity or entities who are divested of title shall be entirely freed and relieved of all covenants and obligations thereafter accruing hereunder, and the grantee or the person or persons, corporation or corporations, or other entity or entities who otherwise succeeds or succeed to title shall be deemed to have assumed the covenants and obligations of Landlord thereafter accruing hereunder, and until the next conveyance or divestiture of title, Tenant shall look solely to said grantee or successor for the observance and performance of the covenants and obligations of Landlord hereunder so assumed by said grantee or successor. Tenant agrees to attorn to any such grantee or successor.

11. Extensions of Term

The term of the Lease is automatically renewed for four (4) consecutive periods (hereinafter sometimes referred to as the Extended Term) of 20 years unless Tenant terminates, in writing, the Lease 180 days prior to such extension. During such Extended Term, all of the terms and conditions of this Lease shall continue in full force and effect.

All references in this Lease to the "term" of this Lease, or to the "term" hereof, shall be deemed to include the original term specified in Article 1 hereof (Demised Premises and Term) and any Extended Terms.

A termination of this Lease pursuant to present or future law, shall extinguish all extension periods.

12. Messages

Any notice, demand, election, payment, or other communication (hereafter in this Article 14 collectively referred to as Messages) which Landlord or Tenant shall desire or be required to give pursuant to the provisions of this Lease shall be sent by registered or certified mail, return receipt requested, and the giving of such Message shall be deemed complete on the third (3<sup>rd</sup>) business day after the same is deposited in a United States Post Office or by facsimile transmission, with confirmation, or by electronic mail with confirmation, at the respective addresses set forth below or to such other address as such party may theretofore have designated by notice pursuant to this Article 12.

Landlord: 2000 West Loop So., Suite 2200, Houston, Texas 77027

Tenant: 2000 West Loop So., Suite 2200, Houston, Texas 77027

13. Non-Waiver

No waiver by Landlord of any breach by Tenant of any term, covenant, condition, or agreement herein and no failure by Landlord to exercise any right or remedy in respect of any breach hereunder, shall constitute a waiver or relinquishment for the future of any such term, covenant, condition, or agreement or of any

subsequent breach of any such term, covenant, condition or agreement, nor bar any right or remedy of Landlord in respect of any such subsequent breach, nor shall the receipt of any rent, or any portion thereof, by Landlord, operate as a waiver of the rights of Landlord to enforce the payment of any other rent then or thereafter in default, or to terminate this Lease, or to recover the Demised Premises, or to invoke any other appropriate remedy which Landlord may select as herein or by law provided.

14. Surrender

Tenant shall, on the last day of the term of this Lease or any extension thereof will and truly surrender and deliver up the Demised Premises, with the Improvements then located thereon into the possession and use of Landlord, without fraud or delay and in good order, condition, and repair, free and clear of all lettings and occupancies, free and clear of all liens and encumbrances other than those existing on the date of this Lease and those, if any, created by Landlord, without any payment or allowance whatever by Landlord on account of or for any buildings and improvements erected or maintained on the Demised Premises at the time of the surrender, or for the contents thereof or appurtenances thereto. Provided, however, that Tenant's Trade Fixtures, personal property, and other belongings of Tenant or of any subtenant or other occupant of space in the Demised Premises shall be and remain the property of Tenant, and Tenant shall have a reasonable time after the expiration of the term of this Lease to remove the same.

15. No Oral Changes

This Lease may not be changed or modified orally, but only by an agreement in writing signed by the party against whom such change or modification is sought to be enforced.

16. Bind and Inure

The terms, covenants, conditions, and agreements of this Lease shall bind and inure to the benefit of the parties hereto and their respective successors and assigns, subject, however, to the provisions of Article 3 (Title to Improvements), Article 9 (Assignment; Subletting) and Article 10 (Definition of Landlord) hereof. Any waiver or rights by either party hereto shall be deemed to be a waiver of such rights not only by such party but every successor and assignee of such party. The word Tenant as used herein shall in each instance be deemed to mean the person or persons, corporation or corporations, or other entity or entities who from time to time shall be primarily obligated under this Lease to perform the obligations of Tenant hereunder.

17. Obligation to Refrain From Discrimination

The parties hereto hereby covenant by and for themselves, their heirs, executors, administrators, and assigns, and all persons claiming under or through them that this Lease is made and accepted upon and subject to the following conditions: That there shall be no discrimination against or segregation of any person or group of persons on account of sex, race, color, creed, national origin, or ancestry, in the leasing, subleasing, transferring, use, or enjoyment of the land herein leased, nor shall the lessee himself, or any person claiming under or through him, establish or permit any such practice or practices of discrimination or segregation with reference to the selection, location, number, use, or

occupancy, of tenants, lessees, sublessees, subtenants, or vendees in the land herein leased.

18. Force Majeure

The time within which either party hereto shall be required to perform any act under this Lease, other than the payment of money, shall be extended by a period of time equal to the number of days during which performance of such act is delayed unavoidably by strikes, lockouts, acts of God, governmental restrictions, failure, or inability to secure materials or labor by reason of priority or similar regulation or order of any governmental or regulatory body, enemy action, civil disturbance, fire, unavoidable casualties, or any other cause beyond the reasonable control of either party hereto, excluding, however, the inability or failure of either party to obtain any financing which may be necessary to carry out its obligations.

Notwithstanding the foregoing, unless the party entitled to such extension shall give notice to the other party hereto (plus concurrent notice by telephone or telegraph if such other party's telephone number is not readily available) of its claim to such extension within three (3) business days after the event giving rise to such claim shall have occurred, there shall be excluded in computing the number of days by which the time for performance of the act in question shall be extended, the number of days which shall have elapsed between the occurrence of such event and the actual giving of such notice.

IN WITNESS WHEREOF, the parties hereto have caused this Lease to be executed as of the day and year first above written.

LANDLORD:

[SEAL]

Attest:  
(Secretary)

Paige Bailey

By:

Shirley O'Donnell

TENANT:

[SEAL]

Attest:  
(Secretary)

Paige Bailey

By:

Michael J. Lister

## **FIRST AMENDMENT TO LEASE AGREEMENT**

THIS FIRST AMENDMENT TO LEASE AGREEMENT (this "Amendment") is made as of the 10th day of December, 2002 by and between Vopak Terminal Deer Park Inc., a Delaware corporation (hereinafter referred to as "Landlord") and Vopak Logistics Services USA Inc., a Delaware corporation (hereinafter referred to as "Tenant") and collectively with Landlord, the "Parties").

WHEREAS, Landlord and Tenant entered into that certain Lease Agreement, dated as of December 9, 2002 (the "Lease"), with respect to the Demised Premises as that term is defined in the Lease;

WHEREAS, the entity name of Tenant was incorrect, as the name "Vopak Industrial Services USA Inc." had been changed to "Vopak Logistics Services USA Inc." on December 4, 2002;

WHEREAS, Landlord and Tenant desire to amend the Lease to reflect the name change, *inter alia*, as set forth below.

NOW, THEREFORE, in consideration of the mutual covenants herein contained and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant hereby agree as follows:

1. Capitalized terms not otherwise defined herein shall have the meaning ascribed to such terms in the Lease.

2. "Tenant" as defined in the preamble of the Lease is hereby amended to mean "Vopak Logistics Services USA Inc., a Delaware corporation."

3. Section 11 of the Lease is hereby deleted in its entirety and replaced with the following:

### **Extensions of Term**

The term of the Lease is automatically renewed for up to four (4) consecutive periods of 20 years each (each period hereinafter referred to as an Extended Term) unless Tenant terminates, in writing, the Lease 180 days prior to each such extension. During such Extended Term, all of the terms and conditions of this Lease shall continue in full force and effect.

All references in this Lease to the "term" of this Lease, or to the "term" hereof, shall be deemed to include the original term specified in Article 1 hereof (Demised Premises and Term) and any Extended Terms.

A termination of this Lease pursuant to present or future law, shall extinguish all extension periods.

4. Except as expressly modified herein, the Lease shall remain in full force and effect, and as modified herein, is expressly ratified and confirmed by the parties hereto.

5. This Amendment shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

6. This Amendment may be executed in counterparts, each of which shall be an original and all of which counterparts taken together shall constitute one and the same agreement. Executed copies of this

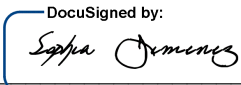
Agreement may be delivered by telecopy and, upon receipt, shall be deemed originals and binding upon the parties hereto.

[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties hereto have caused this Lease to be executed as of the day and year first above written.

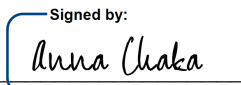
**LANDLORD**

**Vopak Terminal Deer Park Inc.**

By:   
Name: Hugo Teste  
Title: Vice President, Legal and Compliance

**TENANT**

**Vopak Logistics Services USA Inc.**

By:   
Name: Anna Chaka  
Title: Vice President, Finance and Procurement



**APPENDIX I.H**  
**CORE DATA FORM**



# 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

<b>1. Reason for Submission</b> (If other is checked please describe in space provided.)		
<input type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input checked="" type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)		<input type="checkbox"/> Other
<b>2. Customer Reference Number</b> (if issued)	<a href="#">Follow this link to search for CN or RN numbers in Central Registry**</a>	<b>3. Regulated Entity Reference Number</b> (if issued)
CN 601527955		RN 100223007

## SECTION II: Customer Information

<b>4. General Customer Information</b>		<b>5. Effective Date for Customer Information Updates</b> (mm/dd/yyyy)		09/03/2024	
<input type="checkbox"/> New Customer <input checked="" type="checkbox"/> Update to Customer Information <input type="checkbox"/> Change in Regulated Entity Ownership					
<input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)					
<i>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).</i>					
<b>6. Customer Legal Name</b> (If an individual, print last name first: eg: Doe, John)				<i>If new Customer, enter previous Customer below:</i>	
Vopak Logistics Services USA, Inc.					
<b>7. TX SOS/CPA Filing Number</b>		<b>8. TX State Tax ID</b> (11 digits)		<b>9. Federal Tax ID</b> (9 digits)	<b>10. DUNS Number</b> (if applicable)
0800119316		17418198911			
<b>11. Type of Customer:</b>		<input checked="" type="checkbox"/> Corporation		<input type="checkbox"/> Individual	Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited
Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> Other		<input type="checkbox"/> Sole Proprietorship		<input type="checkbox"/> Other:	
<b>12. Number of Employees</b>				<b>13. Independently Owned and Operated?</b>	
<input type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input checked="" type="checkbox"/> 501 and higher				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>14. Customer Role</b> (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following					
<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input checked="" type="checkbox"/> Owner & Operator <input type="checkbox"/> Other:					
<input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> VCP/BSA Applicant					
<b>15. Mailing Address:</b>					
2759 Independence Parkway South					
City		Deer Park		State	TX
ZIP		77536		ZIP + 4	
<b>16. Country Mailing Information</b> (if outside USA)				<b>17. E-Mail Address</b> (if applicable)	
<b>18. Telephone Number</b>		<b>19. Extension or Code</b>		<b>20. Fax Number</b> (if applicable)	

## SECTION III: Regulated Entity Information

<b>21. General Regulated Entity Information</b> (If 'New Regulated Entity' is selected, a new permit application is also required.)								
<input type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input checked="" type="checkbox"/> Update to Regulated Entity Information								
<i>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).</i>								
<b>22. Regulated Entity Name</b> (Enter name of the site where the regulated action is taking place.)								
Vopak Logistics Services USA Deer Park								
<b>23. Street Address of the Regulated Entity:</b>  (No PO Boxes)	2759 Independence Parkway South							
	City	Deer Park	State	TX	ZIP	77536	ZIP + 4	
<b>24. County</b>								

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

<b>25. Description to Physical Location:</b>								
<b>26. Nearest City</b>					<b>State</b>		<b>Nearest ZIP Code</b>	
<i>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).</i>								
<b>27. Latitude (N) In Decimal:</b>			29.740833			<b>28. Longitude (W) In Decimal:</b>		-95.093889
Degrees	Minutes		Seconds		Degrees	Minutes		Seconds
29	44		27		-95	5		38
<b>29. Primary SIC Code</b> (4 digits)		<b>30. Secondary SIC Code</b> (4 digits)		<b>31. Primary NAICS Code</b> (5 or 6 digits)		<b>32. Secondary NAICS Code</b> (5 or 6 digits)		
4953				562211				
<b>33. What is the Primary Business of this entity?</b> (Do not repeat the SIC or NAICS description.)								
Waste storage, treatment and disposal								
<b>34. Mailing Address:</b>		2759 Independence Parkway South						
		City	Deer Park	State	TX	ZIP	77536	ZIP + 4
<b>35. E-Mail Address:</b>								
<b>36. Telephone Number</b>			<b>37. Extension or Code</b>			<b>38. Fax Number</b> (if applicable)		
( 281 ) 604-6000						( ) -		

**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.

**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.


<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input type="checkbox"/> Edwards Aquifer	<input checked="" type="checkbox"/> Emissions Inventory Air	<input checked="" type="checkbox"/> Industrial Hazardous Waste
<input type="checkbox"/> Municipal Solid Waste	<input checked="" type="checkbox"/> New Source Review Air	<input type="checkbox"/> OSSF	<input type="checkbox"/> Petroleum Storage Tank	<input type="checkbox"/> PWS
<input type="checkbox"/> Sludge	<input type="checkbox"/> Storm Water	<input type="checkbox"/> Title V Air	<input type="checkbox"/> Tires	<input type="checkbox"/> Used Oil
<input type="checkbox"/> Voluntary Cleanup	<input checked="" type="checkbox"/> Wastewater	<input type="checkbox"/> Wastewater Agriculture	<input type="checkbox"/> Water Rights	<input checked="" type="checkbox"/> Other: UIC

**SECTION IV: Preparer Information**

<b>40. Name:</b>	Shelby Cole			<b>41. Title:</b>	Environmental Waste Specialist
<b>42. Telephone Number</b>	<b>43. Ext./Code</b>	<b>44. Fax Number</b>	<b>45. E-Mail Address</b>		
( 281 ) 604-6042		(   ) -	shelby.cole@vopak.com		

**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.

<b>Company:</b>	Vopak Logistics Services USA, Inc.	<b>Job Title:</b>	SHEQ Director - US & Canada	
<b>Name (In Print):</b>	Gary Jackson	<b>Phone:</b>	( 281 ) 604- 6060	
<b>Signature:</b>			<b>Date:</b>	9/11/24

## **SECTION II – FACILITY BACKGROUND INFORMATION**

## II. Facility Background Information

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

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

The facility is located within the City of Deer Park Industrial District, near the San Jacinto Battleground State Historic Site, and is bordered to the north by the Houston Ship Channel.

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

The facility is approximately two and a half miles north of Texas State Highway 225, on Independence Parkway (formerly Texas State Highway 134), within Harris County, Texas.

3. Enter the geographical coordinates of the facility:

Latitude: 29 deg 44 min 27 sec

Longitude: 95 deg 05 min 38 sec

4. Is the facility located on Indian lands?

☐ Yes ☒ No

### B. Legal Description of Facility

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

### C. SIC Codes

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

4-digit SIC Code	Description
4953	Refuse Systems (waste treatment / waste disposal)

SIC code numbers are descriptions which may be found in the Standard Industrial Classification Manual prepared by the Executive Officer of the President, Office of Management and Budget, which is available from the Government Printing Office, Washington, D.C. Use the current edition of the manual.

**APPENDIX II.B.**

**ATTACHMENT B – LEGAL DESCRIPTION AND BOUNDARY SURVEY**

**ATTACHMENT B  
SITE LEGAL DESCRIPTION**

**VOPAK LOGISTICS SERVICES USA, INC.**

OF 4.4878 ACRES (CALL 4.4983 ACRES) OF LAND OUT OF A CALLED 91.9370 ACRE TRACT CONVEYED FROM UNION EQUITY COOPERATIVE EXCHANGE, INC. TO ROBERTSON LAND COMPANY, DATED APRIL 6, 1972, AS RECORDED IN HARRIS COUNTY CLERK'S FILE NO. D562335, AND BEING LOCATED IN THE GEORGE ROSS SURVEY, ABSTRACT 646, HARRIS COUNTY, TEXAS SAID 4.4878 ACRES (CALL 4.4983 ACRES) OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCING AT A 5/8 INCH ROD FOUND FOR THE SOUTHEAST CORNER OF SAID 91.9370 ACRE TRACT, AND LOCATED IN THE WEST RIGHT-OF-WAY LINE OF STATE HWY. 134;

THENCE SOUTH 89 DEGREES 40 MINUTES 47 SECONDS WEST ALONG THE SOUTH LINE OF SAID 91.9370 ACRE TRACT, A DISTANCE OF 964.64 FEET TO A POINT FOR THE SOUTHWEST CORNER OF SAID 91.9370 ACRE TRACT;

THENCE NORTH 11 DEGREES 47 MINUTES 35 SECONDS WEST ALONG THE WESTERLY LINE OF SAID 91.9370 ACRE TACT, A DISTANCE OF 2,485.02 FEET TO A POINT FOR CORNER;

THENCE 89 DEGREES 09 MINUTES 32 SECONDS EAST A DISTANCE OF 32.42 FEET TO A 1/2 INCH IRON ROD SET FOR THE PLACE OF BEGINNING OF THE HEREIN DESCRIBED TRACT;

THENCE NORTH 11 DEGREES 46 MINUTES 30 SECONDS WEST ALONG THE EASTERLY EDGE OF A EXISTING GRAVEL AND ASPHALT ROAD, A DISTANCE OF 371.07 FEET (CALL 371.87 FEET) TO A 1/2 INCH IRON RODE SET FOR A POINT OF CURVATURE;

THENCE ALONG THE SOUTHEASTERLY EDGE OF SAID ROAD BEING A NON-TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 85.85 FEET, A CENTRAL ANGLE OF 77 DEGREES 14 MINUTES 03 SECONDS (CALL 77 DEGREES 13 MINUTES 44 SECONDS), AN ARC LENGTH OF 115.72 FEET, A CHORD BEARING OF NORTH 15 DEGREES 53 MINUTES 43 SECONDS EAST AND A CHORD DISTANCE OF 107.16 FEET TO 1/2 INCH IRON ROD SET FOR A POINT OF TANGENCY;





**ATTACHMENT B (Continued)**  
**SITE LEGAL DESCRIPTION**

**VOPAK LOGISTICS SERVICES USA, INC.**

THENCE NORTH 48 DEGREES 53 MINUTES 59 SECONDS EAST CONTINUING ALONG THE SOUTHEASTERLY EDGE OF SAID ROAD, A DISTANCE OF 308.44 FEET TO 1/2 INCH IRON ROD SET FOR CORNER;

THENCE SOUTH 41 DEGREES 06 MINUTES 01 SECONDS EAST A DISTANCE OF 57.09 FEET (CALL 57.83 FEET) TO A POINT FOR CORNER IN THE NORTHERLY EDGE OF A 0.40 FOOT WIDE CONCRETE WALL;

THENCE NORTH 89 DEGREES 19 MINUTES 37 SECONDS EAST ALONG THE EDGE OF SAID WALL, A DISTANCE OF 196.25 FEET (CALL 196.36 FEET) TO A POINT FOR CORNER;

THENCE SOUTH 00 DEGREES 41 MINUTES 53 SECONDS EAST A DISTANCE OF 317.63 FEET TO A POINT FOR CORNER IN THE SOUTH EDGE OF A 0.40 FOOT WIDE CONCRETE WALL;

THENCE SOUTH 89 DEGREES 16 MINUTES 01 SECONDS WEST ALONG THE SOUTH EDGE OF SAID WALL, A DISTANCE OF 77.85 FEET TO A POINT FOR CORNER IN THE EAST EDGE OF A 0.40 FOOT WIDE CONCRETE WALL;

THENCE SOUTH 00 DEGREES 12 MINUTES 23 SECONDS EAST ALONG THE EAST EDGE OF SAID WALL, A DISTANCE OF 33.10 FEET TO A POINT FOR CORNER IN THE SOUTHEASTERLY EDGE OF A 0.40 FOOT WIDE CONCRETE WALL;

THENCE NORTH 89 DEGREES 58 MINUTES 38 SECONDS WEST ALONG THE SOUTH EDGE OF SAID WALL, A DISTANCE OF 76.07 FEET (CALL 74.07 FEET) TO A POINT FOR CORNER IN THE SOUTHEASTERLY EDGE OF A 0.40 FOOT WIDE CONCRETE WALL;

THENCE SOUTH 45 DEGREES 16 MINUTES 26 SECONDS WEST (CALL SOUTH 46 DEGREES 26 MINUTES 38 SECONDS WEST) ALONG THE SOUTHEASTERLY EDGE OF SAID WALL, A DISTANCE OF 71.03 FEET (CALL 72.85 FEET) TO A POINT FOR CORNER IN THE EAST EDGE OF A 0.40 FOOT WIDE CONCRETE WALL;

THENCE SOUTH 02 DEGREES 11 MINUTES 14 SECONDS EAST ALONG THE EAST EDGE OF SAID WALL, A DISTANCE OF 27.16 FEET TO A POINT FOR CORNER IN THE SOUTH EDGE OF A 0.40 FOOT WIDE CONCRETE WALL;



**ATTACHMENT B (Continued)**  
**SITE LEGAL DESCRIPTION**

**VOPAK LOGISTICS SERVICES USA, INC.**

THENCE SOUTH 88 DEGREES 53 MINUTES 21 SECONDS WEST ALONG THE SOUTH EDGE OF SAID WALL, A DISTANCE OF 126.87 FEET TO A POINT FOR CORNER IN THE EAST EDGE OF A 0.40 FOOT WIDE CONCRETE WALL;

THENCE SOUTH 02 DEGREES 47 MINUTES 45 SECONDS EAST ALONG THE EAST EDGE OF SAID WALL, A DISTANCE OF 16.99 FEET TO A POINT FOR CORNER IN THE SOUTH EDGE OF A 0.40 FOOT WIDE CONCRETE WALL;

THENCE SOUTH 85 DEGREES 41 MINUTES 14 SECONDS WEST ALONG THE SOUTH EDGE OF SAID WALL, A DISTANCE OF 7.12 FEET TO A POINT FOR CORNER IN THE SOUTHEASTERLY EDGE OF A 0.40 FOOT WIDE CONCRETE WALL;

THENCE SOUTH 25 DEGREES 18 MINUTES 31 SECONDS WEST ALONG THE SOUTHEASTERLY EDGE OF SAID WALL, A DISTANCE OF 22.86 FEET TO A POINT FOR CORNER IN THE SOUTH EDGE OF A 0.40 FOOT WIDE CONCRETE WALL,

THENCE SOUTH 88 DEGREES 23 MINUTES 56 SECONDS WEST ALONG THE SOUTH EDGE SAID WALL, A DISTANCE OF 21.00 FEET TO A POINT FOR CORNER IN THE EAST EDGE OF A 0.40 FOOT WIDE CONCRETE WALL;

THENCE SOUTH 01 DEGREES 17 MINUTES 02 SECONDS EAST ALONG THE EAST EDGE OF SAID WALL, A DISTANCE OF 62.79 FEET TO A POINT FOR CORNER IN THE NORTH EDGE OF A 0.40 FOOT WIDE CONCRETE WALL;

THENCE NORTH 89 DEGREES 37 MINUTES 14 SECONDS EAST ALONG THE NORTH EDGE OF SAID CONCRETE WALL, A DISTANCE OF 40.94 FEET TO A POINT FOR CORNER IN THE EAST EDGE OF A 0.40 FOOT WIDE CONCRETE WALL;

THENCE SOUTH 01 DEGREES 16 MINUTES 25 SECONDS EAST ALONG THE EAST EDGE OF SAID WALL, A DISTANCE OF 20.35 FEET TO A POINT FOR CORNER IN THE SOUTH EDGE OF 0.40 FOOT WIDE CONCRETE WALL;

THENCE SOUTH 89 DEGREES 06 MINUTES 27 SECONDS WEST ALONG THE SOUTH EDGE OF SAID WALL, A DISTANCE OF 9.91 FEET TO A POINT FOR CORNER IN THE EAST EDGE OF A 0.40 FOOT WIDE CONCRETE WALL;



**ATTACHMENT B (Continued)**  
**SITE LEGAL DESCRIPTION**

**VOPAK LOGISTICS SERVICES USA, INC.**

THENCE SOUTH 01 DEGREES 11 MINUTES 24 SECONDS EAST ALONG THE EAST EDGE OF SAID WALL, A DISTANCE OF 74.04 FEET TO A POINT FOR CORNER IN THE SOUTH EDGE OF A 0.40 FOOT WIDE CONCRETE WALL;

THENCE SOUTH 89 DEGREES 09 MINUTES 32 SECONDS WEST ALONG THE SOUTH EDGE OF SAID WALL, A DISTANCE OF 91.13 FEET TO THE PLACE OF BEGINNING OF THE HEREIN DESCRIBED TRACT AND CONTAINING WITHIN THESE CALLS 195,491 SQUARE FEET (CALL 195,944 SQUARE FEET) OR 4.4878 ACRES (CALL 4.4983) ACRES OF LAND.









### **SECTION III – WASTE AND WASTE MANAGEMENT INFORMATION**

### III. Wastes and Waste Management

#### A. Waste Generation and Management Activities

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

☒ Yes ☐ No

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

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

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

☒ Yes ☐ No ☐ Pending

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

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

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

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

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

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

#### B. Waste Management Units Summary

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

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

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

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

☒ Yes ☐ No

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

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

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

8,126,431,331 lbs. (through 2023).

**C. Location of Waste Management Units**

1. Submit as "Attachment C" a drawn-to-scale topographic map (or other map if a topographic map is unavailable) extending one mile beyond the facility boundaries, depicting the following:
  - a. The approximate boundaries of the facility (described in Section II.B) and within these boundaries, the location and boundaries of the areas occupied by each active, inactive, and proposed hazardous waste management unit (see Table III-2). Each depicted area should be labeled to identify the unit(s), unit status (i.e., active, inactive, or proposed), and areal size in acres.
  - b. The overall facility and all surface intake and discharge structures;
  - c. All on-site injection wells where liquids are injected underground;
  - d. All known monitor wells and boreholes within the property boundaries of the facility; and
  - e. All wells, springs, other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant within the map area and the purpose for which each water well is used (e.g., domestic, livestock, agricultural, industrial, etc.).
2. Submit as "Attachment D" photographs which clearly delineate all hazardous waste management storage, processing, and disposal units, as well as sites of future storage, processing and disposal units.



#### D. Flow Diagram/Description

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

The flow diagrams or descriptions should include the following information:

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

**TABLE III.1**  
**HAZARDOUS WASTE AND MANAGEMENT ACTIVITIES**

**Table III-1 – Hazardous Wastes and Management Activities**

<b>Verbal Description of Waste</b>	<b>TCEQ Waste for Code and Classification Code</b>	<b>EPA Hazardous Waste Number</b>	<b>Storage<sup>1</sup> of Wastes Received from Off-Site</b>	<b>Processing<sup>2</sup> of Wastes Received from Off-Site</b>	<b>Disposal of Wastes Received from Off-Site</b>	<b>Storage<sup>1</sup> of Wastes Generated On-Site</b>	<b>Processing<sup>2</sup> of Wastes Generated On-Site</b>	<b>Disposal of Wastes Generated On-Site</b>	<b>Annual Quantity Generated and/or Received</b>
Spent Solids	310H	D, F, K, P & U waste codes <sup>3</sup>				X	X		5,000
Spent Fuels	206H	D, F, K, P & U waste codes <sup>3</sup>				X	X		5,000
Cartridge Filters – Spent	310H	D, F, K, P & U waste codes <sup>3</sup>				X	X		5,000
Hydrocarbon Contaminated Solids	301H	D, F, K, P & U waste codes <sup>3</sup>				X	X		5,000
Acidic Aqueous Waste	105H	D, F, K, P & U waste codes <sup>3</sup>				X	X	X	5,000
Spent Carbon	404H	D, F, K, P & U waste codes <sup>3</sup>				X	X		5,000
Aqueous Waste – Low Solvents	101H	D, F, K, P & U waste codes <sup>3</sup>				X	X	X	5,000
Aqueous Waste, High Dissolved Solids and Trace Metals	113H	D, F, K, P & U waste codes <sup>3</sup>				X	X	X	5,000
Contaminated Sandblasting Grit	490H	D, F, K, P & U waste codes <sup>3</sup>				X	X		5,000
Mercury Contaminated Waste	319H	D, F, K, P & U waste codes <sup>3</sup>				X	X	X	5,000
Caustic Aqueous Waste	110H	D, F, K, P & U waste codes <sup>3</sup>				X	X	X	5,000

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

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

Verbal Description of Waste	TCEQ Waste for Code and Classification Code	EPA Hazardous Waste Number	Storage <sup>1</sup> of Wastes Received from Off-Site	Processing <sup>2</sup> of Wastes Received from Off-Site	Disposal of Wastes Received from Off-Site	Storage <sup>1</sup> of Wastes Generated On-Site	Processing <sup>2</sup> of Wastes Generated On-Site	Disposal of Wastes Generated On-Site	Annual Quantity Generated and/or Received
Organic Sludge	609H	D, F, K, P & U waste codes <sup>3</sup>				X	X	X	5,000
Inorganic Sludge	519H	D, F, K, P & U waste codes <sup>3</sup>				X	X	X	5,000
Liquid Organic Wastes	219H	D, F, K, P & U waste codes <sup>3</sup>				X	X	X	5,000
Inorganic Salt	319H	D, F, K, P & U waste codes <sup>3</sup>				X	X	X	5,000
Lab Packs	003H	D, F, K, P & U waste codes <sup>3</sup>				X	X		5,000
Washwaters with Low Organics	102H	D, F, K, P & U waste codes <sup>3</sup>				X	X	X	5,000
Contaminated Stormwater	102H	D, F, K, P & U waste codes <sup>3</sup>				X	X	X	5,000
Caustic Solution with Metals and Cyanide	107H	D, F, K, P & U waste codes <sup>3</sup>				X	X	X	5,000
Computer Equipment	319H	D, F, K, P & U waste codes <sup>3</sup>				X	X		5,000
Organic Gas Cylinders	801H	D, F, K, P & U waste codes <sup>3</sup>				X	X		5,000
Waste Corrosive Solids	316H	D, F, K, P & U waste codes <sup>3</sup>				X	X		5,000
Aerosol Cans	308H	D, F, K, P & U waste codes <sup>3</sup>				X	X		5,000
Paint Waste – from Discarded Paint and Paint-Related Materials	209H	D, F, K, P & U waste codes <sup>3</sup>				X	X		5,000
Inorganic Liquids, from handling hazardous waste	103H	D, F, K, P & U waste codes <sup>3</sup>				X	X		5,000
Soil Contaminated with Inorganic Product from Spill Cleanup	302H	D, F, K, P & U waste codes <sup>3</sup>				X	X		5,000
Hazardous Solid Inorganic Waste spent filter media	319H	D, F, K, P & U waste codes <sup>3</sup>				X	X		5,000
Pesticide Waste	401H	D, F, K, P & U waste codes <sup>3</sup>	X	X		X	X		1-1,500,000

Verbal Description of Waste	TCEQ Waste for Code and Classification Code	EPA Hazardous Waste Number	Storage <sup>1</sup> of Wastes Received from Off-Site	Processing <sup>2</sup> of Wastes Received from Off-Site	Disposal of Wastes Received from Off-Site	Storage <sup>1</sup> of Wastes Generated On-Site	Processing <sup>2</sup> of Wastes Generated On-Site	Disposal of Wastes Generated On-Site	Annual Quantity Generated and/or Received
Metallic Waste	103, 106, 107, 117, 303, 304, 307, 308, 309, 312, 316, 502, 510, 519, 604, 606, 609H	D, F, K, P & U waste codes <sup>3</sup>	X	X	X Liquids only				1-1,500,000
Caustic Waste	106, 107, 108, 109, 110H	D, F, K, P & U waste codes <sup>3</sup>	X	X	X				1-1,500,000
Acidic Waste - Spent Acids	103, 104, 105H	D, F, K, P & U waste codes <sup>3</sup>	X	X	X				1-1,500,000
Neutralized Spent Acids	103, 104, 105H	D, F, K, P & U waste codes <sup>3</sup>	X	X	X				1-1,500,000
Organic Waste	201, 202, 203, 304, 205, 206, 207, 208, 209, 210, 211, 212, 219, 296, 297, 298, 299, 401, 402, 403, 404, 405, 406, 407, 409, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 801H	D, F, K, P & U waste codes <sup>3</sup>	X	X	X				1-1,500,000
Inorganic Waste	101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 119, 198, 199, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 319, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 701H	D, F, K, P & U waste codes <sup>3</sup>	X	X	X				1-1,500,000

Verbal Description of Waste	TCEQ Waste for Code and Classification Code	EPA Hazardous Waste Number	Storage <sup>1</sup> of Wastes Received from Off-Site	Processing <sup>2</sup> of Wastes Received from Off-Site	Disposal of Wastes Received from Off-Site	Storage <sup>1</sup> of Wastes Generated On-Site	Processing <sup>2</sup> of Wastes Generated On-Site	Disposal of Wastes Generated On-Site	Annual Quantity Generated and/or Received
Waste Oils and Solvents	203, 205, 206, 207, 209, 210, 211, 212, 219H	D, F, K, P & U waste codes <sup>3</sup>	X	X	X				1-1,500,000
Aqueous Waste	101, 102, 105, 111, 112, 113, 114, 115, 116, 207H	D, F, K, P & U waste codes <sup>3</sup>	X	X	X				1-1,500,000
Washwater	101, 102, 105, 111, 112, 113, 114, 115, 116, 117, 207H	D, F, K, P & U waste codes <sup>3</sup>	X	X	X				1-1,500,000
Contaminated Stormwater	101, 102, 105, 111, 112, 113, 114, 115, 116, 117, 207H	D, F, K, P & U waste codes <sup>3</sup>	X	X	X				1-1,500,000
Sludges	391, 491, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 519, 597, 598, 599, 601, 602, 603, 604, 605, 606, 607, 608, 609, 695, 696, 697, 698, 699H	D, F, K, P & U waste codes <sup>3</sup>	X	X					1-1,500,000
Discarded Off-Spec Products	105, 110, 202, 203, 204, 208, 209, 210, 211, 212, 219, 296, 307, 309, 401, 402, 403H	D, F, K, P & U waste codes <sup>3</sup>	X	X					1-1,500,000
Lab Packs	001, 002, 003, 004, 009H	D, F, K, P & U waste codes <sup>3</sup>	X	X					1-1,500,000
Solids Contaminated with Hydrocarbons	301, 302, 303, 304, 305, 306, 310, 389, 390, 403, 404, 405, 406, 407, 409, 488, 489, 490, 491, 492, 601,	D, F, K, P & U waste codes <sup>3</sup>	X	X					1-1,500,000

Verbal Description of Waste	TCEQ Waste for Code and Classification Code	EPA Hazardous Waste Number	Storage <sup>1</sup> of Wastes Received from Off-Site	Processing <sup>2</sup> of Wastes Received from Off-Site	Disposal of Wastes Received from Off-Site	Storage <sup>1</sup> of Wastes Generated On-Site	Processing <sup>2</sup> of Wastes Generated On-Site	Disposal of Wastes Generated On-Site	Annual Quantity Generated and/or Received
	602, 603, 604, 605, 606, 607, 608, 609, 695, 696, 697, 698H								
Contaminated Filters	310, 404H	D, F, K, P & U waste codes <sup>3</sup>	X	X					1-1,500,000

### 3. All Waste Codes Listed Below:

D Waste Codes: D001 D002 D003 D004 D005 D006 D007 D008 D009 D010 D011 D012 D013 D014 D015 D016 D017 D018 D019 D020 D021 D022 D023 D024 D025 D026 D027 D028 D029 D030 D031 D032 D033 D034 D035 D036 D037 D038 D039 D040 D041 D042 D043.

F Waste Codes: F001 F002 F003 F004 F005 F006 F007 F008 F009 F010 F011 F012 F019 F020 F021 F022 F023 F024 F025 F026 F027 F028 F032 F034 F035 F037 F038 F039.

K Waste Codes: K001 K002 K003 K004 K005 K006 K007 K008 K009 K010 K011 K013 K014 K015 K016 K017 K018 K019 K020 K021 K022 K023 K024 K025 K026 K027 K029 K030 K031 K032 K033 K034 K035 K036 K037 K038 K039 K040 K041 K042 K043 K044 K045 K046 K047 K048 K049 K050 K051 K052 K060 K061 K062 K069 K071 K073 K083 K084 K085 K086 K087 K088 K093 K094 K095 K096 K097 K098 K099 K100 K101 K102 K103 K104 K105 K106 K107 K108 K109 K110 K111 K112 K113 K114 K115 K116 K117 K118 K123 K124 K125 K126 K131 K132 K136 K141 K142 K143 K144 K145 K147 K148 K149 K150 K151 K156 K157 K158 K159 K161 K169 K170 K171 K172 K174 K175 K176 K177 K178 K181.

P Waste Codes: P001 P002 P003 P004 P005 P006 P007 P008 P009 P010 P011 P012 P013 P014 P015 P016 P017 P018 P020 P021 P022 P023 P024 P026 P027 P028 P029 P030 P031 P033 P034 P036 P037 P038 P039 P040 P041 P042 P043 P044 P045 P046 P047 P048 P049 P050 P051 P054 P056 P057 P058 P059 P060 P062 P063 P064 P065 P066 P067 P068 P069 P070 P071 P072 P073 P074 P075 P076 P077 P078 P081 P082 P084 P085 P087 P088 P089 P092 P093 P094 P095 P096 P097 P098 P099 P101 P102 P103 P104 P105 P106 P108 P109 P110 P111 P112 P113 P114 P115 P116 P118 P119 P120 P121 P122 P123 P127 P128 P185 P188 P189 P190 P191 P192 P194 P196 P197 P198 P199 P201 P202 P203 P204 P205.

U Waste Codes: U001 U002 U003 U004 U005 U006 U007 U008 U009 U010 U011 U012 U014 U015 U016 U017 U018 U019 U020 U021 U022 U023 U024 U025 U026 U027 U028 U029 U030 U031 U032 U033 U034 U035 U036 U037 U038 U039 U041 U042 U043 U044 U045 U046 U047 U048 U049 U050 U051 U052 U053 U055 U056 U057 U058 U059 U060 U061 U062 U063 U064 U066 U067 U068 U069 U070 U071 U072 U073 U074 U075 U076 U077 U078 U079 U080 U081 U082 U083 U084 U085 U086 U087 U088 U089 U090 U091 U092 U093 U094 U095 U096 U097 U098 U099 U101 U102 U103 U105 U106 U107 U108 U109 U110 U111 U112 U113 U114 U115 U116 U117 U118 U119 U120 U121 U122 U123 U124 U125 U126 U127 U128 U129 U130 U131 U132 U133 U134 U135 U136 U137 U138 U140 U141 U142 U143 U144 U145 U146 U147 U148 U149 U150 U151 U152 U153 U154 U155 U156 U157 U158 U159 U160 U161 U162 U163 U164 U165 U166 U167 U168 U169 U170 U171 U172 U173 U174 U176 U177 U178 U179 U180 U181 U182 U183 U184 U185 U186 U187 U188 U189 U190 U191 U192 U193 U194 U196 U197 U200 U201 U202 U203 U204 U205 U206 U207 U208 U209 U210 U211 U213 U214 U215 U216 U217 U218 U219 U220 U221 U222 U223 U225 U226 U227 U228 U234 U235 U236 U237 U238 U239 U240 U243 U244 U246 U247 U248 U249 U271 U278 U279 U280 U328 U353 U359 U364 U367 U372 U373 U387 U389 U394 U395 U404 U409 U410 U411.

**TABLE III.2**  
**HAZARDOUS WASTE MANAGEMENT UNIT CHECKLIST**



**Table III-2 – Hazardous Waste Management Unit Checklist**

<b>Waste Management Unit</b>	<b>TCEQ N.O.R. Unit #</b>	<b>Status<sup>1</sup></b>	<b>Design Capacity<sup>2</sup></b>	<b>Number of Years Utilized</b>	<b>Date in Service</b>
05-T-1A	2	Closed	50,000 gallons	39	1980
05-T-1B	22	Active	50,000 gallons	24	2000
05-T-43	23	Active	15,994 gallons	20	2004
05-T-44	24	Active	2,632 gallons	20	2004
05-T-3	25	Active	20,000 gallons	28	1996
05-T-4A	26	Closed	21,000 gallons	39	1980
05-T-4B	27	Active	21,000 gallons	44	1980
05-T-4C	28	Closed	23,000 gallons	37	1982
05-T-4D	29	Active	4,625 gallons	42	1982
05-T-4E	30	Active	4,625 gallons	42	1982
05-T-5	31	Active	200,000 gallons	24	2000
05-T-6	32	Active	21,150 gallons	30	1994
05-T-7	33	Active	20,000 gallons	44	1980
05-T-8	34	Active	20,305 gallons	23	2001
05-T-9A	35	Active	24,000 gallons	24	2000
05-T-9B	36	Active	21,000 gallons	44	1980
05-T-9C	37	Closed	5,600 gallons	23	1996
05-T-21	38	Active	19,990 gallons	30	1994
05-T-22	39	Active	19,990 gallons	30	1994
05-T-23	40	Proposed	20,000 gallons	--	--
05-T-24	41	Proposed	20,000 gallons	--	--
05-T-25	42	Proposed	20,000 gallons	--	--
05-T-563	49	Active	504,000 gallons	28	1996
05-T-567	50	Inactive	504,000 gallons	---	---
05-T-583	52	Active	504,000 gallons	34	1990
05-T-584	53	Closed	504,000 gallons	29	1990
05-T-585	54	Closed	504,000 gallons	29	1990
05-T-589	56	Active	504,000 gallons	23	2001
05-T-590	57	Active	504,000 gallons	34	1990
05-T-591	58	Active	126,900 gallons	27	1997
05-C-1	59	Active	74,000 gallons	40	1984
05-C-2	60	Active	1,175 gallons	40	1984
05-C-3	61	Active	2,277 gallons	40	1984
05-C-4	62	Active	288 gallons	40	1984
05-T-51	63	Active	11,700 gallons	26	1998

<sup>1</sup> Indicate only one of the following: Active, Inactive, Closed, or Proposed

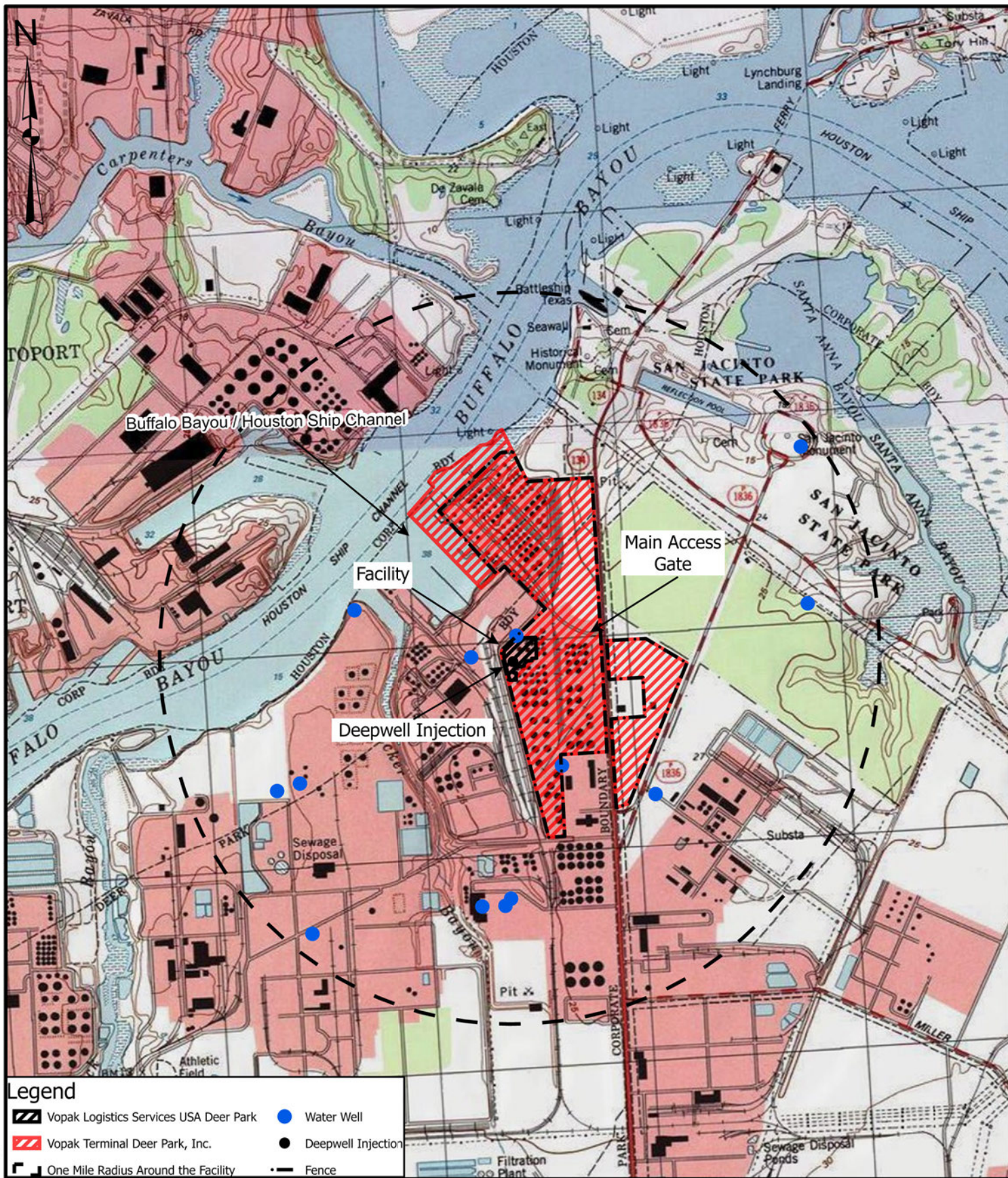
<sup>2</sup> Cubic yards, gallons, pounds, gallons/minute, pounds/hour, BTUs/hour, etc.

<b>Waste Management Unit</b>	<b>TCEQ N.O.R. Unit #</b>	<b>Status<sup>1</sup></b>	<b>Design Capacity<sup>2</sup></b>	<b>Number of Years Utilized</b>	<b>Date in Service</b>
05-T-52	64	Active	12,000 gallons	44	1980
05-T-53	65	Active	10,100 gallons	44	1980
05-T-54	66	Active	10,400 gallons	36	1988
05-T-55	67	Active	10,400 gallons	36	1988
05-D-1	5	Active	89,760 gallons	38	1986
05-D-1	5	Proposed	153,120 gallons	--	--
05-D-3	14	Active	49,692 gallons	34	1990
05-F-1A	78	Active	958 gallons	29	1995
05-F-1B	79	Active	958 gallons	29	1995
05-F-2	69	Active	24 gallons	29	1995
05-F-3	70	Active	24 gallons	29	1995
05-F-4	80	Active	400 gallons	28	1996
05-V-1	71	Closed	37 gallons	16	2004
05-V-2	117	Active	37 gallons	4	2020
05-B-1	17	Active	7,687 gallons	29	1995
05-B-2	18	Active	7,687 gallons	29	1995
02-D-2	21	Closed	77,600 gallons	--	--
05-T-574	81	Active	20,305 gallons	19	2005
05-T-575	107	Active	20,305 gallons	19	2005
05-T-39	108	Proposed	20,305 gallons	--	--
05-T-40	109	Proposed	20,305 gallons	--	--
05-T-41	110	Proposed	20,305 gallons	--	--
05-T-42	111	Proposed	20,305 gallons	--	--
05-T-48	112	Active	1,190 gallons	29	1995
05-T-49	113	Active	2,490 gallons	29	1995

### **APPENDIX III.C.1**

## **ATTACHMENT C – FACILITY BOUNDARIES AND ADJACENT WATERS MAP**





Source: Vopak Logistics Services USA, Inc., ArcGIS Data, and Harris County Appraisal District

Note: Drawing to be used for Permitting Purposes Only

Revision No.1  
Date: January 20, 2025

Date: July 31, 2024

Vopak Logistics Services USA, Inc.  
2759 Independence Parkway South  
Deer Park, Texas 77536

0 1,000 2,000 4,000 Feet  
Scale 1" = 2,000'

Prepared By: EngiCon Environmental, LLC

Facility Boundaries  
and  
Adjacent Waters Map

**EngiCon**  
Environmental



## **APPENDIX III.C.2**

### **ATTACHEMNT D – PHOTOGRAPHS OF WASTE MANAGEMENT UNITS**

<b>Owner / Operator:</b> Vopak Logistics Services USA, Inc.	<b>Facility Location:</b> 2759 Independence Parkway S, Deer Park Texas
<b>Project Name:</b> Hazardous Waste Permit Renewal Application	<b>EPA ID No.</b> TXD097673149 <b>SWR No.:</b> 30567; <b>Waste Permit No.:</b> 50025



Truck Unloading Area



Permit Unit No. 57: Unit 05-B-1



Permit Unit No. 58: Unit 05-B-2



Permit Unit No. 57 & 58: Unit 05-B-1 & 05-B-2



Permit Unit No. 43: Unit 05-T-51



Permit Unit No. 44: Unit 05-T-52

<b>Owner / Operator:</b> Vopak Logistics Services USA, Inc.	<b>Facility Location:</b> 2759 Independence Parkway S, Deer Park Texas
<b>Project Name:</b> Hazardous Waste Permit Renewal Application	<b>EPA ID No.</b> TXD097673149 <b>SWR No.:</b> 30567; <b>Waste Permit No.:</b> 50025



Permit Unit No. 45: Unit 05-T-53



Permit Unit No. 46: Unit 05-T-54



Permit Unit No. 47: Unit 05-T-55



Permit Unit No. 50: Unit 05-D-3



Permit Unit No. 50: Unit 05-D-3



Permit Unit No. 50: Unit 05-D-3



<b>Owner / Operator:</b> Vopak Logistics Services USA, Inc.	<b>Facility Location:</b> 2759 Independence Parkway S, Deer Park Texas
<b>Project Name:</b> Hazardous Waste Permit Renewal Application	<b>EPA ID No.</b> TXD097673149 <b>SWR No.:</b> 30567; <b>Waste Permit No.:</b> 50025



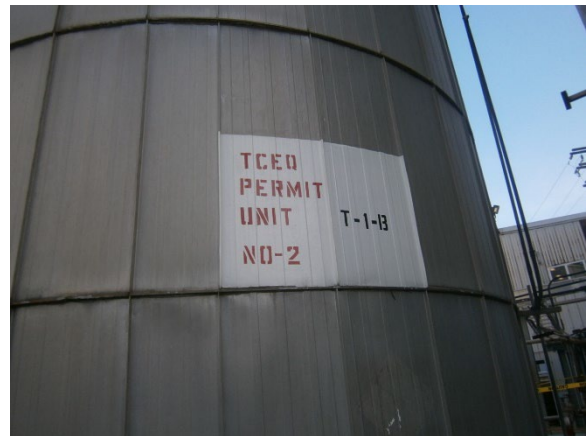
Permit Unit No. 11: Unit 05-T-5



Permit Unit No. 14: Unit 05-T-8



Permit Unit No. 1: Unit 05-T-1A (CLOSED)



Permit Unit No. 2: Unit 05-T-1B



Permit Unit No. 15: Unit 05-T-9A



Permit Unit No. 16: Unit 05-T-9B



<b>Owner / Operator:</b> Vopak Logistics Services USA, Inc.	<b>Facility Location:</b> 2759 Independence Parkway S, Deer Park Texas
<b>Project Name:</b> Hazardous Waste Permit Renewal Application	<b>EPA ID No.</b> TXD097673149 <b>SWR No.:</b> 30567; <b>Waste Permit No.:</b> 50025



Permit Unit No. 5: Unit 05-T-3



Permit Unit No. 6: Unit 05-T-4A (CLOSED)



Permit Unit No. 7: Unit 05-T-4B



Permit Unit No. 3: Unit 05-T-43



Permit Unit No. 4: Unit 05-T-44



Permit Unit No. 39: Unit 05-C-1

<b>Owner / Operator:</b> Vopak Logistics Services USA, Inc.	<b>Facility Location:</b> 2759 Independence Parkway S, Deer Park Texas
<b>Project Name:</b> Hazardous Waste Permit Renewal Application	<b>EPA ID No.</b> TXD097673149 <b>SWR No.:</b> 30567; <b>Waste Permit No.:</b> 50025



Permit Unit No. 40: Unit 05-C-2



Permit Unit No. 41: Unit 05-C-3



Permit Unit No. 42: Unit 05-C-4



Permit Unit No. 51: Unit 05-F-1A



Permit Unit No. 52: Unit 05-F-1B



Permit Unit No. 51 & 52: Unit 05-F-1A & 05-F-1B



<b>Owner / Operator:</b> Vopak Logistics Services USA, Inc.	<b>Facility Location:</b> 2759 Independence Parkway S, Deer Park Texas
<b>Project Name:</b> Hazardous Waste Permit Renewal Application	<b>EPA ID No.</b> TXD097673149 <b>SWR No.:</b> 30567; <b>Waste Permit No.:</b> 50025



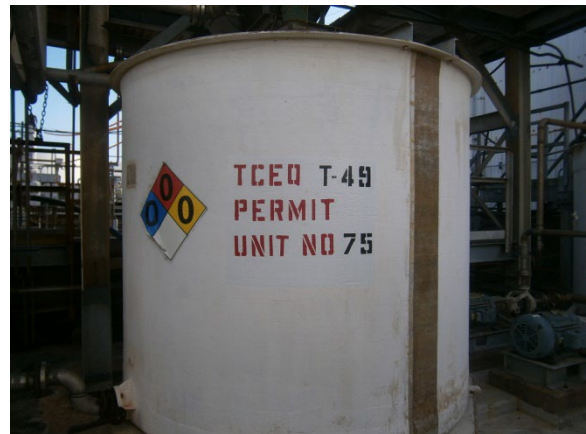
Permit Unit No. 53 & 54: Unit 05-F-2 & 05-F-3



Permit Unit No. 117: Unit 05-V-2



Permit Unit No. 74: Unit 05-T-48



Permit Unit No. 75: Unit 05-T-49



Permit Unit No. 63: Unit 05-T-574

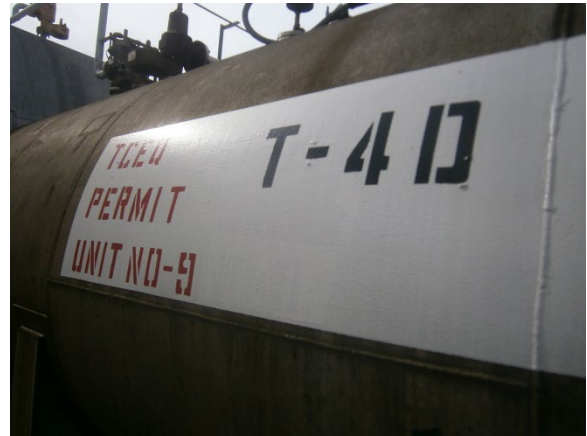


Permit Unit No. 64: Unit 05-T-575

<b>Owner / Operator:</b> Vopak Logistics Services USA, Inc.	<b>Facility Location:</b> 2759 Independence Parkway S, Deer Park Texas
<b>Project Name:</b> Hazardous Waste Permit Renewal Application	<b>EPA ID No.</b> TXD097673149 <b>SWR No.:</b> 30567; <b>Waste Permit No.:</b> 50025



Permit Unit No. 8: Unit 05-T-4C (CLOSED)



Permit Unit No. 9: Unit 05-T-4D



Permit Unit No. 10: Unit 05-T-4E



Permit Unit No. 18: Unit 05-T-21



Permit Unit No. 19: Unit 05-T-22



Permit Unit No. 55: Unit 05-F-4



<b>Owner / Operator:</b> Vopak Logistics Services USA, Inc.	<b>Facility Location:</b> 2759 Independence Parkway S, Deer Park Texas
<b>Project Name:</b> Hazardous Waste Permit Renewal Application	<b>EPA ID No.</b> TXD097673149 <b>SWR No.:</b> 30567; <b>Waste Permit No.:</b> 50025



Permit Unit No. 29: Unit 05-T-563



Permit Unit No. 30: Unit 05-T-567



Permit Unit No. 32: Unit 05-T-583



Permit Unit No. 33: Unit 05-T-584 (CLOSED)



Permit Unit No. 34: Unit 05-T-585 (CLOSED)



Permit Unit No. 36: Unit 05-T-589

<b>Owner / Operator:</b> Vopak Logistics Services USA, Inc.	<b>Facility Location:</b> 2759 Independence Parkway S, Deer Park Texas
<b>Project Name:</b> Hazardous Waste Permit Renewal Application	<b>EPA ID No.</b> TXD097673149 <b>SWR No.:</b> 30567; <b>Waste Permit No.:</b> 50025



Permit Unit No. 37: Unit 05-T-590



Permit Unit No. 38: Unit 05-T-591



Permit Unit No. 12: Unit 05-T-6



Permit Unit No. 13: Unit 05-T-7



Permit Unit No. 17: Unit 05-T-9C (CLOSED)



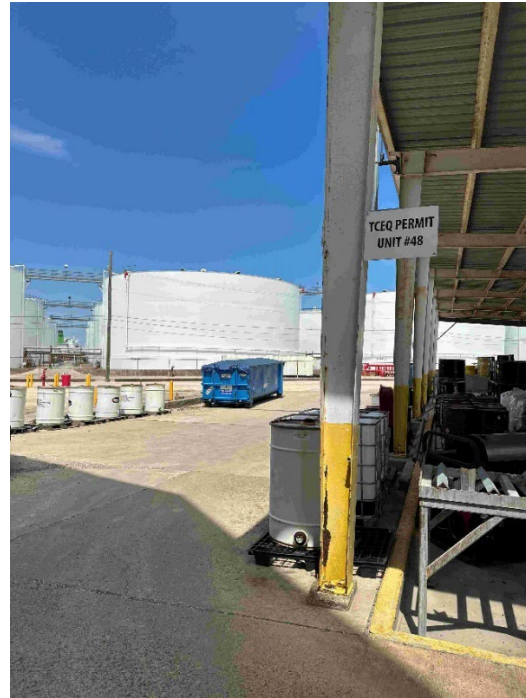
Permit Unit No. 48: Unit 05-D-1



<b>Owner / Operator:</b> Vopak Logistics Services USA, Inc.	<b>Facility Location:</b> 2759 Independence Parkway S, Deer Park Texas
<b>Project Name:</b> Hazardous Waste Permit Renewal Application	<b>EPA ID No.</b> TXD097673149 <b>SWR No.:</b> 30567; <b>Waste Permit No.:</b> 50025



Permit Unit No. 48: Unit 05-D-1



Permit Unit No. 48: Unit 05-D-1 (Proposed)



Permit Unit No. 48: Unit 05-D-1 (Proposed)

**APPENDIX III.D**  
**ATTACHMENT E – PROCESS FLOW DESCRIPTION**



<b>1.0</b>	<b>Process Flow Description .....</b>	<b>1</b>
1.1	Fuel Recovery System.....	1
1.2	Emulsified Oil Treatment System .....	2
1.3	Biological Wastewater Treatment.....	2
1.4	Deep Well Injection System.....	2
1.5	Solids Management .....	2
1.6	PCB Storage .....	3
<b>2.0</b>	<b>Management of Rainfall .....</b>	<b>3</b>
<b>3.0</b>	<b>Management of Excess (Carryover) Containment Volumes.....</b>	<b>3</b>
<b>4.0</b>	<b>Transfer Controls .....</b>	<b>3</b>
<b>5.0</b>	<b>Alternate Disposal.....</b>	<b>3</b>

## 1.0 Process Flow Description

The Process Flow Description is prepared for the Vopak Logistics Services USA Deer Park facility located at 2759 Independence Parkway South, Deer Park, Texas 77536 (hereafter referred to as VLS or the facility). The Process Flow Description has been prepared as part of the hazardous waste permit renewal application, and in accordance with the U.S. Environmental Protection Agency (EPA) and the Texas Commission on Environmental Quality (TCEQ) requirements.

Wastes are shipped to the facility using truck, railcar, waterway or pipeline for processing and/or storage in one or more operating areas as listed below:

- Fuel Recovery System (Fuels);
- Emulsified Oil Treatment System (EOTS);
- Biological Wastewater Treatment (Wastewater, or WW);
- Deep Well Injection System (DWIS);
- Solids Management; and
- PCB Storage.

Waste management units are generally designated to function within these operating areas. The Operations Manager may, however, transfer materials to any appropriate unit using facility operating procedures that take into account compatibility issues. Whereas past practice has internally restricted wastes destined for DWIS from being placed in WW designated tanks (or vice versa), crossover may occur, and any tanks designated to manage a certain type of waste may be used in that manner regardless of the final destination of the waste.

As described in detail in the facility Waste Analysis Plan, a Plant Work Order (PWO) is issued for each waste stream. The PWO contains the information needed to properly off load, transfer, treat and/or store the waste and is based on a detailed laboratory evaluation. The PWO defines the waste management units the waste will enter and the subsequent transfer sequence, taking into account compatibility issues with other wastes being managed concurrently.

### 1.1 Fuel Recovery System

The purpose of the fuel recovery system is the accumulation of oils, solvents and organic matter. Organic phases are first skimmed and accumulated into a mixture of organic, aqueous and light solids where steam is applied to create a density change for organic and aqueous separation. The aqueous phase is decanted back to the receiving tank. The organic phase is transferred to a holding tank. If the organic phase has an emulsified aqueous stream requiring additional treatment, then the waste is transferred to EOTS. If the organic phase is bound by solids, steam is applied and then the waste is filtered prior to phase separation treatment. Certain oils and solvents are used to enhance emulsion breaking and may be transferred into the treatment tank as required. Multiple treatment iterations may be applied, as necessary, including filtration, to achieve phase separation. Once a phase separation is complete, the aqueous portion is transferred to the DWIS or WW for further treatment prior to disposal, and the organic phase is transferred to storage for accumulation prior to shipment off-site for energy recovery.

## **1.2 Emulsified Oil Treatment System**

Organic wastes recovered from treatment of emulsified oils with chemicals, solvents, acids, steam, caustic or de-emulsifiers are transferred to Fuels. Aqueous waste may be transferred to either WW or DWIS for final treatment and disposal.

## **1.3 Biological Wastewater Treatment**

Aqueous waste is stored and treated in the WW system prior to being discharged from the TPDES permitted outfall. This system receives aqueous waste from other treatment systems on-site and directly from off-site sources. Organic phases recovered during the WW treatment process are transferred to the Fuels system. Accumulated solids are transferred to the solids area for further processing and storage.

## **1.4 Deep Well Injection System**

Waste that may be disposed of by injection is first stored and treated as necessary in the DWIS area. Organics are removed and transferred to Fuels. Remaining fluids are neutralized and/or filtered as necessary prior to injection. Accumulated solids are transferred to the Solids area for further processing and storage. Disposal is authorized by an Underground Injection Control (UIC) permit.

## **1.5 Solids Management**

Waste collected from filtration units and manifested solids that arrive at the facility are stored in containers. Processing of solids includes solidification and neutralization within fiber, plastic or carbon steel drums, totes, vacuum boxes or dumpsters. A PWO containing the necessary information for processing accompanies the waste throughout the treatment process which may include:

- Removing of waste by decanting, pumping, pouring or vacuuming of liquids (manual or mechanical methods);
- Removing of solids by dumping, shoveling or picking the waste;
- Solidifying of wastes;
- Heating to decrease viscosity;
- Solubilizing;
- Triple rinsing to remove residues; and/or
- Crushing (typically of drums) by compacting or otherwise disassembling the container.

For processing within containers, waste material is transferred manually using shovels or other hand tools and mixed thoroughly with the predetermined solidifying agent. After processing, each container is properly secured, labeled and sealed for transfer to an authorized container storage area. For decontamination, all solids remaining in the work area are removed manually with a shovel and placed into a container. The tools are then washed with clean hot or cold water that is collected. Following equipment cleaning, the entire work area is sprayed, and the rinsate is collected. Rinsate is vacuumed or pumped from the collection point and transferred to the DWIS or WW system for final disposal.

During precipitation, no processing is performed in uncovered container storage areas. All containers are covered when not in use.

## **1.6 PCB Storage**

Receipt and storage of PCB waste is authorized for certain container storage areas and tanks. No treatment or co-mingling of this waste with other waste occurs.

## **2.0 Management of Rainfall**

Precipitation that enters a containment area and is determined to be contaminated is transferred by vacuum truck or hard- or soft-piped to be processed by a permitted, onsite treatment system.

## **3.0 Management of Excess (Carryover) Containment Volumes**

As demonstrated within the Engineering Report, adequate secondary containment is available on a facility wide basis. In process and storage areas where the required secondary containment volume is less than the available volume, the difference between the calculated worst-case volume is identified as the "carryover" volume. This volume may be placed in available storage tanks. The available volume of each unit and within the facility is known at all times as operators record unit volumes prior to each shift change.

## **4.0 Transfer Controls**

Transfer of liquids or sludge is performed under the supervision of a trained operator. All transfers are conducted to prevent the release of liquids. Manual safety cut-off devices are utilized in each system transfer. Any releases that occur are contained and promptly removed with the area rinsed as necessary to remove the released materials. Contaminated rinse waters are transferred to receiving tanks and processed in an appropriate on-site treatment system (such as DWIS or WW).

## **5.0 Alternate Disposal**

A determination may be made that any waste may be disposed offsite in lieu of onsite disposal. In this case, the waste is properly managed until it is transferred to the transport vehicle for shipment under a manifest to an authorized Treatment, Storage or Disposal Facility.

## **SECTION IV – INDEX of ATTACHMENTS**

#### IV. Index Of Attachments

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

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

Vopak Logistics Services USA Deer Park  
2759 Independence Parkway South, Deer Park, Texas 77536

Hazardous Waste Permit No. 50025  
Hazardous Waste Permit Renewal Application

## **PART B**



# **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](mailto: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](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](mailto: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<sup>1</sup>, 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, blueprints, 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](mailto: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<sup>1</sup> 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.

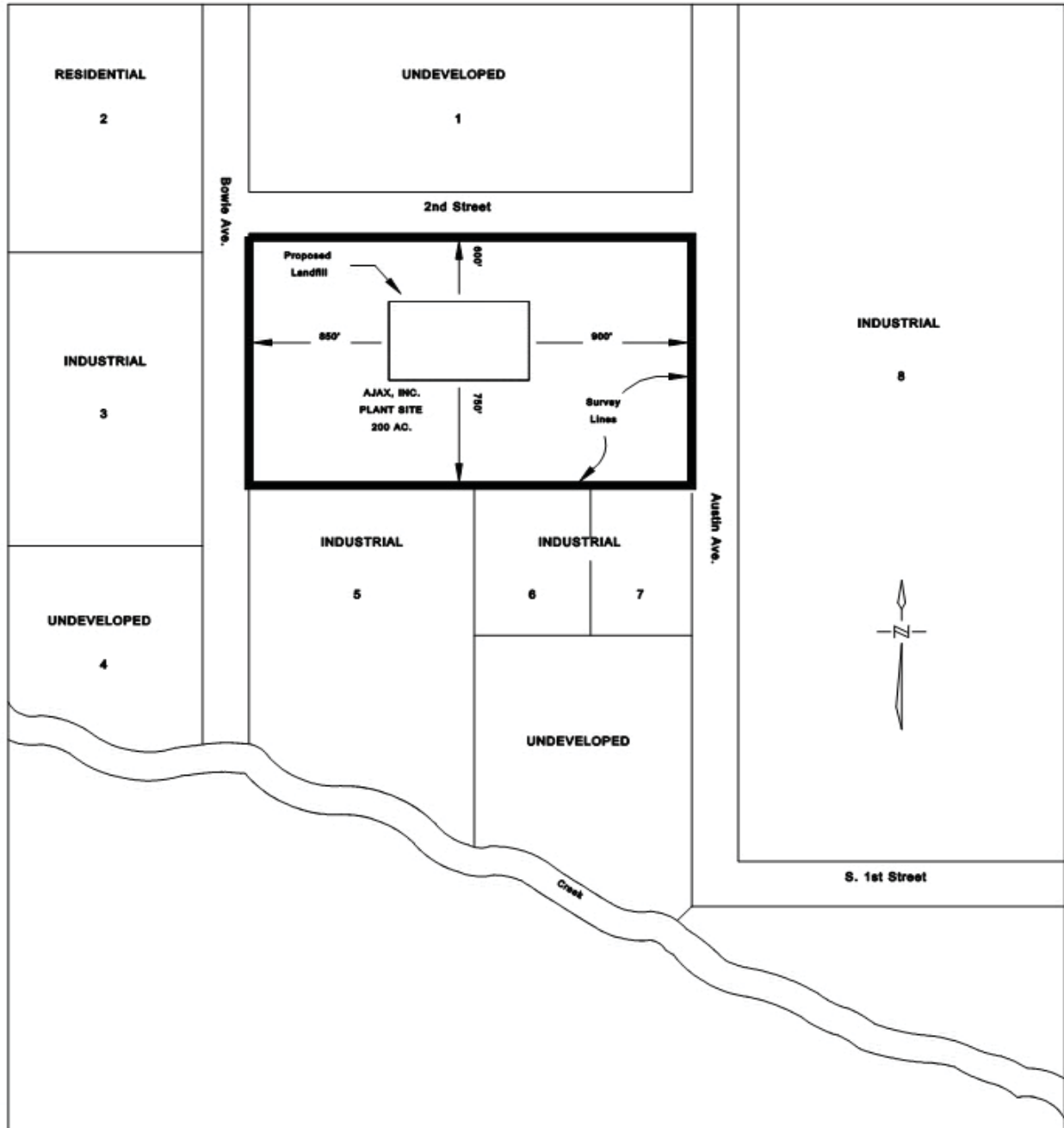
If it is determined that a bilingual notice is required, the applicant is responsible for ensuring that the publication in the alternate language is complete and accurate in that language. Electronic versions of the Spanish template examples are available from the TCEQ to help the applicant complete 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<br>11901 STARTLE BLVD<br>ATOWN TX 78759       | 5. GENERIC BREWING CO<br>4240 KNIGHTS BRIDGE<br>OUTBACK TX 77640 |
| 2. MR & MRS EDWARD CITIZENS<br>1405 LINEAR ROAD<br>LITTLE TOWN TX 76710   | 6. PLAIN COMPANY<br>6647 CRAIGMOUT LANE<br>BIG PLACE TX 77590    |
| 3. TEXAS LINKED CORP<br>8411 NNW HWY<br>BIG PLACE TX 77590                | 7. ABC CHEMICALS INC<br>1212 ZIP STREET<br>BROADBANKS TX 77640   |
| 4. MR & MRS TED GOLDEN MUSTARD<br>3210 AVENUE BLVD<br>FISHINSPOT TX 76724 | 8. BIG LOCAL BOTTLE CO<br>10024 LOCAL BLVD<br>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<sup>1</sup> 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:**

Industrial Hazardous Waste Permit No. 50000, Texas Chemical Plant

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.

[TCEQ Core Data Form \(TCEQ-10400\) \[External weblink to download form\]](#)

[Signature Page for Application](#)

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CP Table XI.E.3. - Financial Assurance Summary

**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 VII - Closure and Post-Closure Plan  
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Appendix VIII - Financial Assurance Information  
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

Vopak Logistics Services USA Deer Park  
2759 Independence Parkway South, Deer Park, Texas 77536

Hazardous Waste Permit No. 50025  
Hazardous Waste Permit Renewal Application

## **BILINGUAL NOTICE CONFIRMATION**

### **Bilingual Notice Instructions:**

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

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

#### ***Bilingual notice confirmation for this application:***

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No

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

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

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

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

☐ Yes ☐ No

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

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

-----

## **SECTION 1 – GENERAL 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](#)

- 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<sup>1</sup>, 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](https://www.tceq.texas.gov/permitting/central_registry/guidance.html)

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
- e. Submit List and Map of Adjacent Landowners List, as applicable.



## **APPENDIX I**

### **GENERAL INFORMATION**

**TABLE I**  
**GENERAL INFORMATION**

Table I: General Information

A. Applicant: Facility Operator

Name <sup>1</sup>	Vopak Logistics Services USA, Inc.
Address <sup>2</sup>	2759 Independence Parkway South
City, State <sup>2</sup>	Deer Park, Texas
Zip Code <sup>2</sup>	77536
Telephone Number	281-604-6000
Alternate Telephone Number	
TCEQ Solid Waste Registration No.	30567
EPA I.D. No.	TXD097673149
Permit No.	50025
County	Harris
Regulated Entity Name	Vopak Logistics Services USA Deer Park
Regulated Entity Reference Number (RN)	RN100223007
Customer Name <sup>2</sup>	Vopak Logistics Services USA, Inc.
Customer Reference Number:	CN601527955
Charter Number <sup>3</sup>	0800119316
Previous or Former Names of the Facility (if applicable)	Vopak Industrial Services USA, Inc.

B. Facility Owner: Identify the Facility Owner if different than the Facility Operator<sup>4</sup>

☒ Same as Facility Operator?

Name	
Address	
City, State	
Zip Code	
Telephone Number	
Alternate Telephone Number	

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

Name, Title:	Shelby Cole, Environmental Waste Specialist
Address	2759 Independence Parkway South
City, State:	Deer Park, Texas
Zip Code	77536
Telephone Number	281-604-6042
Alternate Telephone Number	
E-mail	

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

Name, Title:	Gary Jackson, PE., SHEQ Director
Address	2759 Independence Parkway South
City, State:	Deer Park, Texas
Zip Code	77536
Telephone Number	281-604-6060
Alternate Telephone Number	
E-mail	

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

Name, Title:	None
Address	
City, State:	
Zip Code	

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

Name:	Shelby Cole
Address	2759 Independence Parkway South
City, State:	Deer Park, Texas
Zip Code	77536
Telephone Number	281-604-6042
Alternate Telephone Number	
E-mail	

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

Name	Deer Park Public Library
Address	3009 Center Street
City, State	Deer Park, Texas
Zip Code	77536

**D. Application Type and Facility Status****1. Application Type**

- |   |   |   |
|---|---|---|
| <input checked="" type="checkbox"/> Permit  | <input checked="" type="checkbox"/> Amendment | <input type="checkbox"/> Modification         |
| <input type="checkbox"/> New                | <input type="checkbox"/> Major                | <input type="checkbox"/> Class 3              |
| <input checked="" type="checkbox"/> Renewal | <input checked="" type="checkbox"/> Minor     | <input type="checkbox"/> Class 2              |
| <input type="checkbox"/> Interim Status     |   | <input type="checkbox"/> Class 1 <sup>1</sup> |
| <input type="checkbox"/> Compliance Plan    |   | <input type="checkbox"/> Class 1              |
| <input type="checkbox"/> RD&D               |   |   |

**2. Part of a Consolidated Permit Processing request? [30 TAC Chapter 33]**

No

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

No

**4. Facility Status. Check all that apply**

- |  |  |
|--|--|
| <input type="checkbox"/> Proposed            | <input checked="" type="checkbox"/> On-Site          |
| <input checked="" type="checkbox"/> Existing | <input checked="" type="checkbox"/> Off-site         |
|  | <input checked="" type="checkbox"/> Commercial       |
|  | <input type="checkbox"/> Recycle                     |
|  | <input type="checkbox"/> Land Disposal               |
|  | <input type="checkbox"/> Areal or capacity expansion |
|  | <input type="checkbox"/> Compliance plan             |

**5. Is the facility within the Coastal Management Program boundary?**

Yes

**6. Description of Application Changes**

Complete Table I.1 - Description of Proposed Application Changes

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

**7. Total acreage of the facility being permitted:**

Approximately Five Acres

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

River Segment

Houston Ship Channel Tidal

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

No

No

No

No

Yes

No

No

**F. Wastewater and Stormwater Disposition**

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

Yes

If Yes: List WDW Permit No(s):

WDW 157 and WDW 407

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.

TPDES Permit No.

WQ0001731000



No

Date TCEQ discharge permit application filed:

Date TPDES discharge application filed:

1997

**G. Information Required to Provide Notice**

## State Officials List [30 TAC 39]

## State Senator

Name:	Carol Alvarado [carol.alvarado@senate.texas.gov]
Address	P.O. Box 12068
City, State:	Austin, Texas
Zip Code:	78711

## State Representative

Name:	Mary Ann Perez [maryann.perez@house.texas.gov]
Address	P.O. Box 2910
City, State:	Austin, Texas
Zip Code	78768

## Local Officials List [30 TAC 39]

## Mayor

Name:	Jerry Mouton, Jr. [REDACTED]
Address	710 East San Augustine Street
City, State:	Deer Park, Texas
Zip Code	77536

## Local Health Authority

Name:	Jay Stokes [REDACTED]
Address	710 East San Augustine Street
City, State:	Deer Park, Texas
Zip Code	77536

## County Judge

Name:	Judge Lina Hidalgo [judge.hidalgo@harriscountytexas.gov]
Address	1001 Preston Street
City, State:	Houston, Texas
Zip Code	77002

## County Health Authority

Name:	Barbie Robinson [REDACTED]
Address	1111 Fannin Street
City, State:	Houston, Texas
Zip Code	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?(Required)

Yes

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

Yes

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

Yes

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

**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
Application Part A, Part B and related documents.	Updates and corrections (no changes to permitted units).	Renewal and Minor Amendment	30 TAC 305 Subchapter D

**APPENDIX I.B**  
**CORE DATA FORM**



# 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

<b>1. Reason for Submission</b> (If other is checked please describe in space provided.)		
<input type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input checked="" type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)		<input type="checkbox"/> Other
<b>2. Customer Reference Number</b> (if issued)	<a href="#">Follow this link to search for CN or RN numbers in Central Registry**</a>	<b>3. Regulated Entity Reference Number</b> (if issued)
CN 601527955		RN 100223007

## SECTION II: Customer Information

<b>4. General Customer Information</b>		<b>5. Effective Date for Customer Information Updates</b> (mm/dd/yyyy)		09/03/2024	
<input type="checkbox"/> New Customer <input checked="" type="checkbox"/> Update to Customer Information <input type="checkbox"/> Change in Regulated Entity Ownership					
<input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)					
<i>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).</i>					
<b>6. Customer Legal Name</b> (If an individual, print last name first: eg: Doe, John)				<i>If new Customer, enter previous Customer below:</i>	
Vopak Logistics Services USA, Inc.					
<b>7. TX SOS/CPA Filing Number</b>		<b>8. TX State Tax ID</b> (11 digits)		<b>9. Federal Tax ID</b> (9 digits)	<b>10. DUNS Number</b> (if applicable)
0800119316		17418198911			
<b>11. Type of Customer:</b>		<input checked="" type="checkbox"/> Corporation		<input type="checkbox"/> Individual	Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited
Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> Other		<input type="checkbox"/> Sole Proprietorship		<input type="checkbox"/> Other:	
<b>12. Number of Employees</b>				<b>13. Independently Owned and Operated?</b>	
<input type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input checked="" type="checkbox"/> 501 and higher				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>14. Customer Role</b> (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following					
<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input checked="" type="checkbox"/> Owner & Operator <input type="checkbox"/> Other:					
<input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> VCP/BSA Applicant					
<b>15. Mailing Address:</b>					
2759 Independence Parkway South					
City		Deer Park		State	TX
ZIP		77536		ZIP + 4	
<b>16. Country Mailing Information</b> (if outside USA)				<b>17. E-Mail Address</b> (if applicable)	
<b>18. Telephone Number</b>		<b>19. Extension or Code</b>		<b>20. Fax Number</b> (if applicable)	

## SECTION III: Regulated Entity Information

<b>21. General Regulated Entity Information</b> (If 'New Regulated Entity' is selected, a new permit application is also required.)								
<input type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input checked="" type="checkbox"/> Update to Regulated Entity Information								
<i>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).</i>								
<b>22. Regulated Entity Name</b> (Enter name of the site where the regulated action is taking place.)								
Vopak Logistics Services USA Deer Park								
<b>23. Street Address of the Regulated Entity:</b>  (No PO Boxes)	2759 Independence Parkway South							
	<b>City</b>	Deer Park	<b>State</b>	TX	<b>ZIP</b>	77536	<b>ZIP + 4</b>	
<b>24. County</b>								

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

<b>25. Description to Physical Location:</b>								
<b>26. Nearest City</b>					<b>State</b>		<b>Nearest ZIP Code</b>	
<i>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).</i>								
<b>27. Latitude (N) In Decimal:</b>			29.740833			<b>28. Longitude (W) In Decimal:</b>		-95.093889
Degrees	Minutes		Seconds		Degrees	Minutes		Seconds
29	44		27		-95	5		38
<b>29. Primary SIC Code</b> (4 digits)		<b>30. Secondary SIC Code</b> (4 digits)		<b>31. Primary NAICS Code</b> (5 or 6 digits)		<b>32. Secondary NAICS Code</b> (5 or 6 digits)		
4953				562211				
<b>33. What is the Primary Business of this entity?</b> (Do not repeat the SIC or NAICS description.)								
Waste storage, treatment and disposal								
<b>34. Mailing Address:</b>		2759 Independence Parkway South						
		<b>City</b>	Deer Park	<b>State</b>	TX	<b>ZIP</b>	77536	<b>ZIP + 4</b>
<b>35. E-Mail Address:</b>								
<b>36. Telephone Number</b>			<b>37. Extension or Code</b>			<b>38. Fax Number</b> (if applicable)		
( 281 ) 604-6000						( ) -		

**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.

**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.


<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input type="checkbox"/> Edwards Aquifer	<input checked="" type="checkbox"/> Emissions Inventory Air	<input checked="" type="checkbox"/> Industrial Hazardous Waste
<input type="checkbox"/> Municipal Solid Waste	<input checked="" type="checkbox"/> New Source Review Air	<input type="checkbox"/> OSSF	<input type="checkbox"/> Petroleum Storage Tank	<input type="checkbox"/> PWS
<input type="checkbox"/> Sludge	<input type="checkbox"/> Storm Water	<input type="checkbox"/> Title V Air	<input type="checkbox"/> Tires	<input type="checkbox"/> Used Oil
<input type="checkbox"/> Voluntary Cleanup	<input checked="" type="checkbox"/> Wastewater	<input type="checkbox"/> Wastewater Agriculture	<input type="checkbox"/> Water Rights	<input checked="" type="checkbox"/> Other: UIC

**SECTION IV: Preparer Information**

<b>40. Name:</b>	Shelby Cole			<b>41. Title:</b>	Environmental Waste Specialist
<b>42. Telephone Number</b>	<b>43. Ext./Code</b>	<b>44. Fax Number</b>	<b>45. E-Mail Address</b>		
( 281 ) 604-6042		(   ) -	shelby.cole@vopak.com		

**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.

<b>Company:</b>	Vopak Logistics Services USA, Inc.	<b>Job Title:</b>	SHEQ Director - US & Canada	
<b>Name (In Print):</b>	Gary Jackson	<b>Phone:</b>	( 281 ) 604- 6060	
<b>Signature:</b>			<b>Date:</b>	9/11/24

**APPENDIX I.C**  
**SIGNATURE PAGE**

**Signature Page**

I, Gustavo Nery, Site Director,  
(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: [Signature] Date: May 21, 2025

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

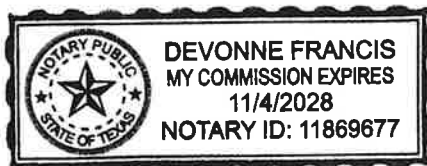
I, \_\_\_\_\_, hereby designate \_\_\_\_\_  
[Print or Type Name] [Print or Type Name]

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

\_\_\_\_\_  
Printed or Typed Name of Operator or Principal Executive Officer

\_\_\_\_\_  
Signature

SUBSCRIBED AND SWORN to before me by the said Gustavo Nery  
On this 21 day of May, 2025  
My commission expires on the 4th day of November, 2028  
Notary Public in and for Harris County, Texas  
[Note: Application Must Bear Signature & Seal of Notary Public]



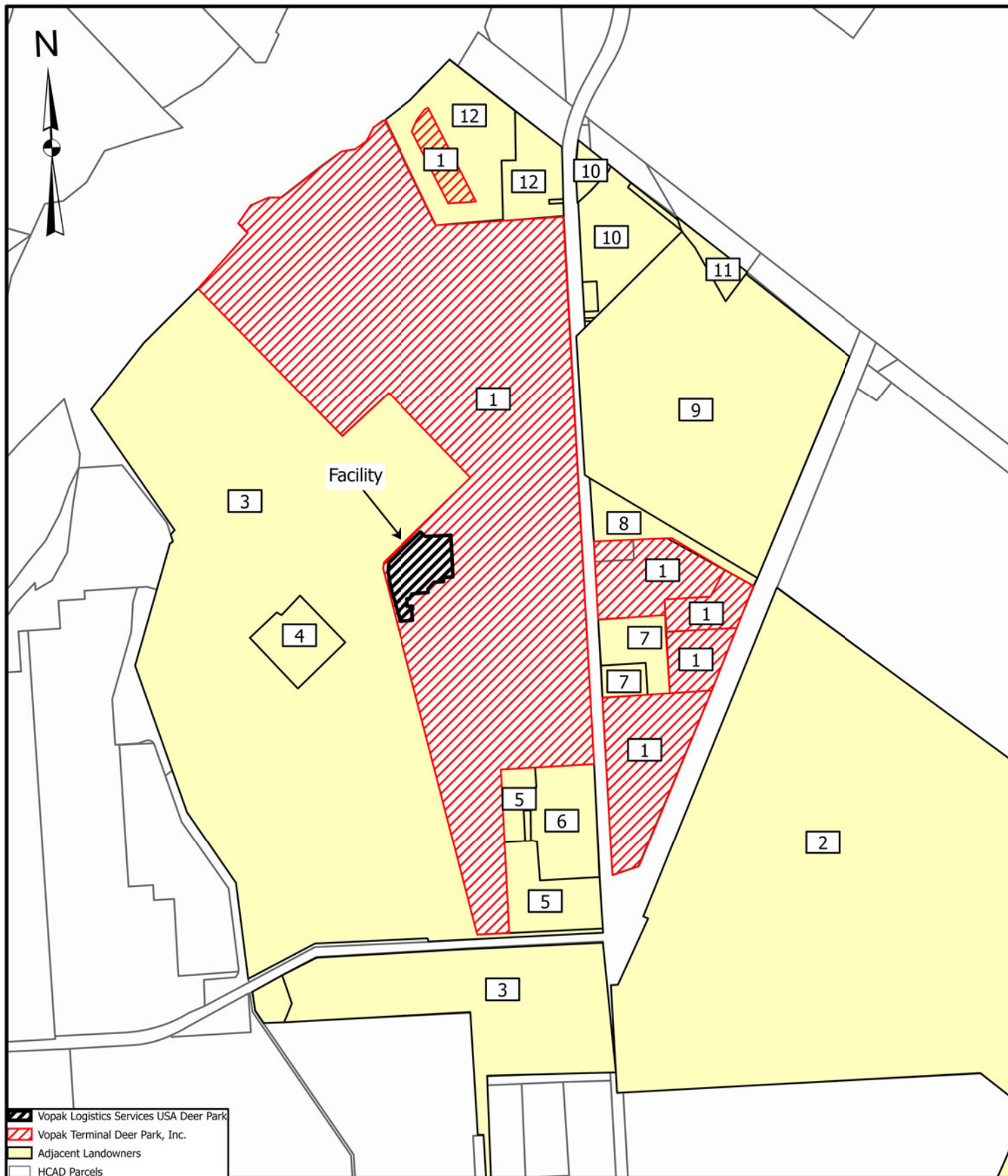
Devonne Francis



**APPENDIX I.D**  
**INTERIM STATUS CERTIFICATION**  
**(Not Applicable)**

This section is not applicable to the facility since there are no interim status land disposal units onsite.

**APPENDIX I.E**  
**MAP AND LIST OF ADJACENT LANDOWNERS**



- Vopak Logistics Services USA Deer Park
- Vopak Terminal Deer Park, Inc.
- Adjacent Landowners
- HCAD Parcels

Source: Vopak Logistics Services USA, Inc.,  
ArcGIS Data, and Harris County Appraisal District

Vopak Logistics Services USA, Inc.  
2759 Independence Parkway South  
Deer Park, Texas 77536

0 500 1,000 2,000  
Feet  
Scale 1" = 1,000'

Note: Drawing to be used for Permitting Purposes Only

Date: July 31, 2024

Prepared By: EngiCon Environmental, LLC

Adjacent  
Landowners Map

**EngiCon**  
Environmental

Key to Adjacent Landowners Map:

1. VOPAK TERMINAL NORTH AMERICA, INC.  
2759 INDEPENDENCE PARKWAY SOUTH  
DEER PARK, TEXAS  
  
VOPAK TERMINAL DEER PARK, INC.  
2759 INDEPENDENCE PARKWAY SOUTH  
DEER PARK, TEXAS
2. OCCIDENTAL CHEMICAL CORPORATION  
ATTN: TAX DEPT  
PO BOX 27570  
HOUSTON, TEXAS 77227-7570
3. INTERCONTINENTAL TERMINAL  
PO BOX 698  
DEER PARK, TEXAS 77536-0698
4. VALVOLINE OIL COMPANY  
ATTN: ASHLAND OIL INC.  
PO BOX 55630  
LEXINGTON, KENTUCKY 40555-5630  
  
GRP HOLDINGS LLC  
100 VALVOLINE WAY SUITE 200  
LEXINGTON, KENTUCKY 40509-2714
5. TM DEER PARK SERVICES, LP  
PO BOX 1914  
DEER PARK, TEXAS 77536-1914
6. DSI TRANSPORTS INC.  
ATTN: G WEED  
PO BOX 3500  
CALGARY, ALBERTA T29 2P9  
CANADA
7. ROBINSON PROPERTY HOLDINGS LLC  
C/O GP REAL ESTATE ADVISORS INC  
222 E CARRILLO STREET SUITE 111  
SANTA BARBARA, CALIFORNIA 93101-7148
8. GULF SOUTH INTERMODAL INC.  
3433 HIGHWAY 190 PMB 316  
MANDEVILLE, LOUISIANA 70471-3101
9. STATE OF TEXAS  
PO BOX 1386  
HOUSTON, TEXAS 77251-1386

10. SAN JACINTO MUSEUM OF HISTORY  
1 MONUMENT CIRCLE  
LA PORTE, TEXAS 77571-9585
11. TEXAS PARKS AND WILDLIFE DEPARTMENT  
4200 SMITH SCHOOL ROAD  
AUSTIN, TEXAS 78744-3218
12. COASTAL INDUSTRIAL WATER AUTHORITY  
1200 SMITH STREET SUITE 2260  
HOUSTON, TEXAS 77002-4500

## **SECTION II – FACILITY SITING CRITERIA**

## 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.

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.

**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.

- 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)]

RESERVED

- 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)]

RESERVED

- 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)]

RESERVED

- 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)

RESERVED

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.
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.
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.
  - 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)]
  - 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)]
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:

- 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 RESERVED

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)]
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.
3. For new commercial hazardous waste management facilities, submit the following: [30 TAC 305.50(a)(12)(A)]
  - 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)]
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)]
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.
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.

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)]

## **APPENDIX II**

### **SITE SELECTION REPORT**



## **FACILITY SITING CRITERIA PART B – SECTION II**

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
PERMIT RENEWAL APPLICATION FOR A HAZARDOUS WASTE  
STORAGE, PROCESSING, AND DISPOSAL FACILITY**

**HAZARDOUS WASTE PERMIT NO. 50025**

**DATE: SEPTEMBER 6, 2024**

**PREPARED FOR:**

**VOPAK LOGISTICS SERVICES USA, INC.  
VOPAK LOGISTICS SERVICES USA DEER PARK  
2759 INDEPENDENCE PARKWAY SOUTH  
DEER PARK, TEXAS 77536**

**PREPARED BY:**

**ENGICON ENVIRONMENTAL, LLC.  
1717 WEST 34<sup>TH</sup> STREET, SUITE 600 # 120  
HOUSTON, TEXAS, 77018**



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## **1.0 INTRODUCTION**

The original Site Selection Report prepared for the Vopak Logistics Services USA Deer Park facility located at 2759 Independence Parkway South, Deer Park, Texas 77536 (hereafter referred to as VLS or the facility) is not available, and as such, this Site Selection Report is based on the prior permit renewal application, and any other relevant or updated information since the prior renewal application if any (e.g., as related to flooding), and in accordance with Title 30 of the Texas Administrative Code (TAC) Chapter 335 Subchapter G.

The Unsuitable Site Characteristics information is provided in accordance with 30 TAC 335.204 below.

## **2.0 STORAGE OR PROCESSING FACILITIES**

The facility does not store or process hazardous waste in surface impoundments.

### **2.1 Flood Plain**

The facility is not located in a 100-year flood plain as shown on the Flood Plain Map which was prepared based on the Federal Emergency Management Agency (FEMA) Firm Map Number 48201C0930M. In addition, the waste management units are located within impervious (concrete) secondary containment areas.

This complies in accordance with 30 TAC §335.204(a)(1) as related to the 100-year floodplain requirements.

### **2.2 Wetlands**

The facility is not located in wetlands as shown by the National Wetlands Inventory prepared by the U.S. Fish and Wildlife Service, and as of the date of this permit renewal application.

This complies in accordance with 30 TAC §335.204(a)(2) as related to the wetland's requirements.

### **2.3 Sole Source Aquifers**

The facility is not located on the recharge zone of a sole-source aquifer as shown on the Sole Source Aquifers Map prepared by the U.S. Environmental Protection Agency under the Safe Drinking Water Act. In addition, the waste management units are located within impervious (concrete) secondary containment areas.

This complies in accordance with 30 TAC §335.204(a)(3) as related to the recharge zone of a sole-source aquifer requirements.

### **2.4 Regional Aquifers**

The facility is located over a major aquifer, the Gulf Coast, as detailed in "*Report 238: Ground-Water Availability in Texas, Estimates and Projections Through 2030*", dated September 1979, and "*Report 380: Aquifers of Texas*" dated July 2011, as prepared by the Texas Water Development Board.

However, as indicated in the original submittal, the regional aquifer is separated from the facility by a minimum of ten feet of material with a hydraulic conductivity not greater than  $10^{-7}$  centimeters per second (cm/sec), and that secondary containment is provided to preclude migration to groundwater from spills, leaks or discharges.

This complies in accordance with 30 TAC §335.204(a)(4) as related to the regional aquifers' requirements.

### **2.5 Soils**

The facility is located in areas where soil units within five feet of the containment structures have a Unified Soil Classification of CH (materials consist of clay), with a hydraulic conductivity greater than  $10^{-5}$  cm/sec, as provided in the Natural Resources Conservation Center Web Soil Survey, prepared by the US Department of Agriculture. In addition, the waste management units are located within impervious (concrete) secondary containment areas.



This complies in accordance with 30 TAC §335.204(a)(5) as related to the soil units' requirements.

## **2.6 Drainage**

The facility is not located in areas of direct drainage within one mile of a lake, for a lake that is used to supply public drinking water through a public water system as shown on the Water Data for Texas Map prepared by the Texas Water Development Board and as shown on the Public Water System Map prepared by the Texas Commission on Environmental Quality. In addition, the waste management units are located within impervious (concrete) secondary containment areas.

This complies in accordance with 30 TAC §335.204(a)(6) as related to the drainage requirements.

## **2.7 Active Geologic Processes**

The facility is not located in areas of active geologic processes as shown on the National Geologic Map Database prepared by the US Geologic Survey.

This complies in accordance with 30 TAC §335.204(a)(7) as related to the active geologic processes.

## **2.8 Critical Habitat of Endangered Species**

The facility is not located in the critical habitat of an endangered species of plant or animal as shown on the Critical Habitat for Threatened & Endangered Species Map prepared by the US Fish and Wildlife Service.

This complies in accordance with 30 TAC §335.204(a)(8) as related to the critical habitat's requirements.

## **2.9 Fault**

The facility is not located within 30 feet of the upthrown side or 50 feet of the downthrown side of the actual or inferred surface expression of a fault as shown on the Subsidence Map prepared by the Harris-Galveston Subsidence District.

This complies in accordance with 30 TAC §335.204(a)(9) as related to the active fault requirements.

### **3.0 Land Treatment Facilities**

This is not applicable to the facility in accordance with 30 TAC 335.204(b).

### **4.0 Waste Piles**

This is not applicable to the facility in accordance with 30 TAC 335.204(c).

### **5.0 Storage Surface Impoundments**

This is not applicable to the facility in accordance with 30 TAC 335.204(d).

### **6.0 Landfills**

This is not applicable to the facility in accordance with 30 TAC 335.204(e).

### **7.0 Injection Wells**

The facility has two permitted underground waste disposal wells, WDW Permit Numbers 157 and 407, and does not inject hazardous waste in any salt dome formation, salt bed formation, underground mine, or cave.

This complies in accordance with 30 TAC §335.204(f) as related to the injection wells.

**TABLE II**  
**REQUIREMENTS FOR HAZARDOUS WASTE FACILITY UNITS**

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**Table II**

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

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

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

In wetlands? [as applicable: 30 TAC 335.204(a)(2), (b)(2), (c)(2), (d)(2), and/or (e)(2)]

**If Yes:** the TCEQ shall not issue a permit for a new hazardous waste management facility or areal expansion of an existing facility into wetlands, pursuant to 30 TAC 335.205(a)(1).

In the critical habitat of an endangered species of plant or animal?<sup>6</sup> [as applicable: 30 TAC 335.204(a)(8), (b)(10), (c)(9), (d)(9), and/or (e)(11)]

**If Yes:** submit in Section V information demonstrating that design, construction, and operational features will prevent adverse effects on such critical habitat.

On the recharge zone of a sole-source aquifer?<sup>2</sup> [30 TAC 335.204(a)(3), (b)(3), (c)(3), (d)(3), and/or (e)(3)]

**If Yes:** then for storage and processing facilities (excluding storage surface impoundments), submit in Section V information demonstrating that secondary containment is provided to preclude migration to groundwater from spills, leaks, or discharges.

In an area overlying a regional aquifer? [as applicable: 30 TAC 335.204(a)(4), (b)(4), (c)(4), (d)(4), and/or (e)(4)]

**If Yes:** submit site-specific information in Section V and/or Section VI demonstrating compliance with 30 TAC 335.205(a)(1).

In areas where soil unit(s) are within five feet of the containment structure, or treatment zone, as applicable, that have a Unified Soil Classification of GW, GP, GM, GC, SW, SP, or SM, or a hydraulic conductivity greater than 10-5 cm/sec? [as applicable: 30 TAC 335.204(a)(5), (b)(5), (c)(5), (d)(5), and/or (e)(5)]

**If Yes:** provide additional information in Sections V and/or Section VI demonstrating compliance with 30 TAC 335.205(a)(1)

In areas of direct drainage within one mile of a lake at its maximum conservation pool level, if the lake is used to supply public drinking water through a public water system?<sup>6</sup> [as applicable: 30 TAC 335.204 (a)(6), (b)(7), (c)(6), and/or (e)(8)].

**If Yes:** provide information in Section V demonstrating compliance with 30 TAC 335.205(a)(1).

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In areas of active geologic processes, including but not limited to erosion, submergence, subsidence, faulting, karst formation, flooding in alluvial flood wash zones, meandering river bank cuttings, or earthquakes?<sup>6</sup> [as applicable: 30 TAC 335.204(a)(7), (b)(8), (c)(7), (d)(7), and/or (e)(9)]

Within 30 feet of the upthrown side or 50 feet of the downthrown side of the actual or inferred surface expression of a fault that has reasonably been shown to have caused displacement of shallow Quaternary sediments or of man-made structures?<sup>6</sup> [as applicable: 30 TAC 335.204(a)(9), (b)(12), (c)(11), (d)(11), and/or (e)(13)]

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

If a fault is found to be present, the width and location of the actual or inferred surface expression of the fault, including both the identified zone of deformation and the combined uncertainties in locating a fault trace, must be determined by a qualified geologist or geotechnical engineer and reported in Section VI.

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

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

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

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

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

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

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

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

On a barrier island or peninsula?

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

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

Is the waste pile located or proposed to be located:

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

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

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

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



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

Is the landfill located or proposed to be located:

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

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

Is the facility within a 100-year flood plain?

Has a flood plain map been provided?

Has information about flooding levels and events, and other special flooding factors, been provided?<sup>3</sup>

Do any flood protection devices exist at the facility (e.g., flood walls, dikes, etc.) designed to prevent washout from the 100-year flood?<sup>3</sup>

**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)]<sup>4</sup>

**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)]<sup>5</sup>

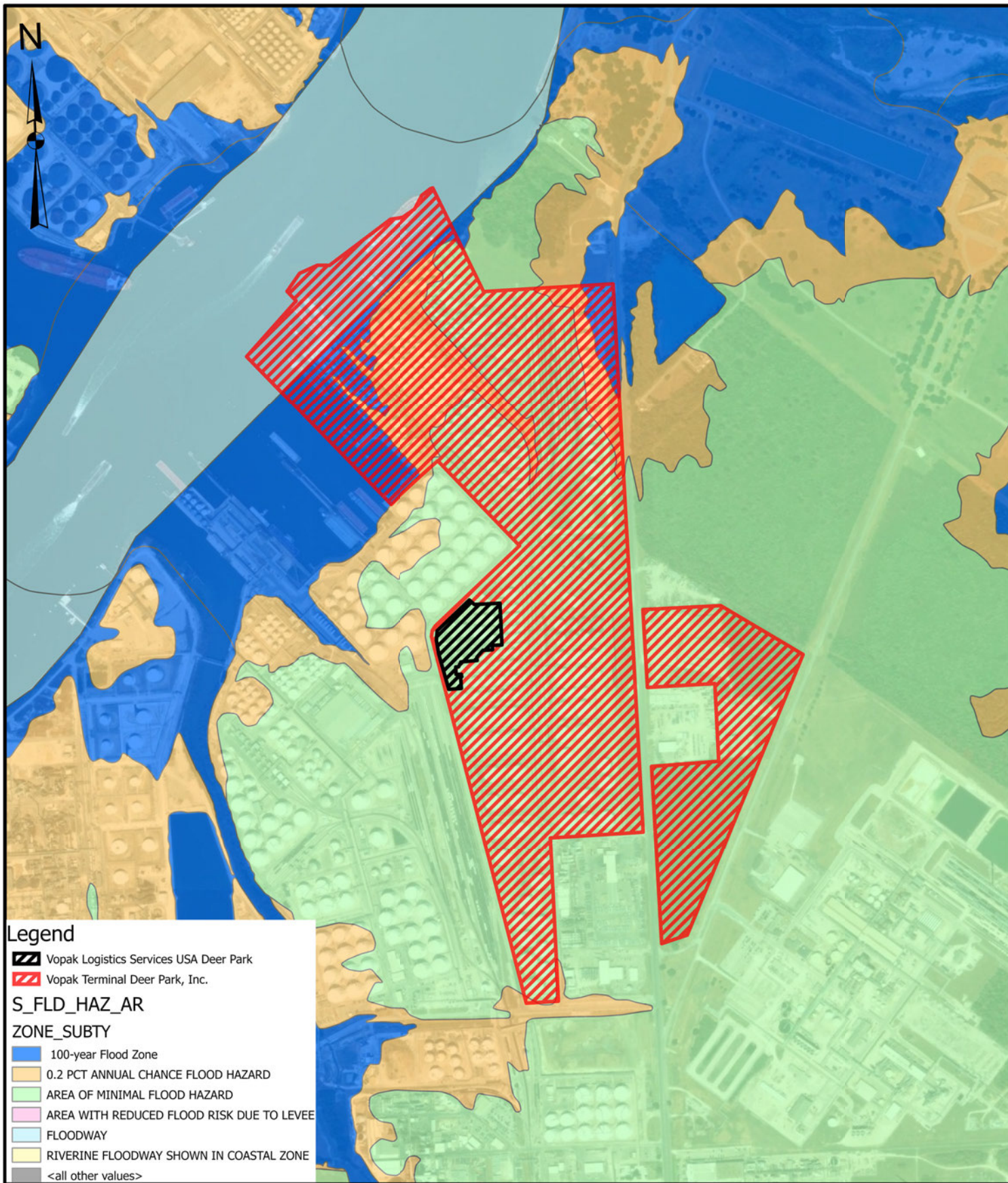
If applicable, and in lieu of the flood protection devices from above, was a detailed description of the procedures to be followed to remove hazardous waste to safety before the facility is flooded provided?<sup>3, 6</sup>

Additional Information Requirements (see Section II instructions, Item G): Submitted?

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

## **APPENDIX II.F FLOOD PLAIN MAP**





Source: FEMA Firm Map No. 48201C0930M.

Vopak Logistics Services USA, Inc.  
2759 Independence Parkway South  
Deer Park, Texas 77536

0 500 1,000 2,000  
Feet  
Scale 1" = 2,000'

Note: Drawing to be used for Permitting Purposes Only

Date: July 31, 2024

Prepared By: EngiCon Environmental, LLC

Flood Plain Map

**EngiCon**  
Environmental

## **APPENDIX II.G**

### **ADDITIONAL INFORMATION**

This is not applicable. It's a renewal application and no additional information requirements were identified.

### **SECTION III – FACILITY MANAGEMENT**

### 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).
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).

#### 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.

#### 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.

#### 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).

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.

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.
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.
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.
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.

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.)

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.

RESERVED

## **APPENDIX III**

### **FACILITY MANAGEMENT INFORMATION**



**FACILITY MANAGEMENT  
PART B – SECTION III**

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
PERMIT RENEWAL APPLICATION FOR A HAZARDOUS WASTE  
STORAGE, PROCESSING, AND DISPOSAL FACILITY**

**HAZARDOUS WASTE PERMIT NO. 50025**

**DATE: SEPTEMBER 6, 2024**

**PREPARED FOR:**

**VOPAK LOGISTICS SERVICES USA, INC.  
VOPAK LOGISTICS SERVICES USA DEER PARK  
2759 INDEPENDENCE PARKWAY SOUTH  
DEER PARK, TEXAS 77536**

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Appendix III.F. Emergency Response Plan

**APPENDIX III.A**  
**COMPLIANCE HISTORY AND APPLICANT EXPERIENCE**

Vopak Logistics Services USA, Inc. does not own, operate, or control any other solid waste management sites in Texas other than Vopak Logistics Services USA Deer Park as associated with this application.

However, the following facilities are owned and/or operated by the parent company:

- Vopak Terminal Deer Park, Inc. – CN 601178734  
Vopak Terminal Deer Park – RN100225093  
EPA ID No.: TXD000807982  
Solid Waste Registraton No.: 33579
- Vopak Terminal Deer Park, Inc. – CN 601178734  
Vopak Terminal Deer Park South – RN106449788
- Vopak Terminal Deer Park, Inc. – CN 601178734  
Vopak Terminal Corpus Christi – RN110886900  
EPA ID No.: TXR000085567  
Solid Waste Registraton No.: 97957
- Vopak North America – CN603529728  
Galena Park West Chemical Plant – RN102753670  
EPA ID No.: TXD000807990  
Solid Waste Registraton No.: 30556



**APPENDIX III.B**  
**PERSONNEL TRAINING PLAN**



## **PERSONNEL TRAINING PLAN PART B – APPENDIX III.B**

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
PERMIT RENEWAL APPLICATION FOR A HAZARDOUS WASTE  
STORAGE, PROCESSING, AND DISPOSAL FACILITY**

**HAZARDOUS WASTE PERMIT NO. 50025**

**DATE: SEPTEMBER 6, 2024**

**PREPARED FOR:**

**VOPAK LOGISTICS SERVICES USA, INC.  
VOPAK LOGISTICS SERVICES USA DEER PARK  
2759 INDEPENDENCE PARKWAY SOUTH  
DEER PARK, TEXAS 77536**

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## **1.0 INTRODUCTION**

The Personnel Training Plan is prepared for the Vopak Logistics Services USA Deer Park facility located at 2759 Independence Parkway South, Deer Park, Texas 77536 (hereafter referred to as VLS or the facility). The Personnel Training Plan has been prepared for facility personnel that manage hazardous waste as part of complying with the hazardous waste permit, and in accordance with Title 40 of the Code of Federal Regulations Part 264 Subpart B Rule 16 (40 CFR §264.16 – Personnel Training).

The Personnel Training Plan provides a general outline of the training program provided at the facility and it is not intended to lay out a complete list of the job titles, positions and duties, and personnel at the facility. The objective is to describe the training provided to facility personnel to the extent practicable. In addition, detailed information on facility personnel, training records, and job descriptions are maintained in the facility records.

## **2.0 OUTLINE OF THE TRAINING PLAN**

### **2.1 Training Program**

The facility has a comprehensive training program which provides initial and ongoing training, and that includes classroom instruction and on-the-job training, to ensure facility personnel perform their duties in compliance with the applicable environmental, health and safety regulations, and the requirements of the Resource Conservation and Recovery Act (RCRA). This training program is designed to provide facility personnel that manage hazardous waste with the necessary operational skills, knowledge and experience, and understanding of the emergency response measures. The training program is provided by proficient and knowledgeable personnel who are already trained as required.

### **2.2 Training Frequency**

The facility personnel complete the required training within six months of employment or after being assigned to a job position requiring hazardous waste management. Until facility personnel successfully complete the required training, new or transferred personnel will be supervised by skilled and knowledgeable personnel.

Classroom training will be provided to facility personnel (requiring the training) on an initial and annual refresher basis. The initial training provides more detail on the training program topics outlined below, and as relevant to the facility personnel job duties and responsibilities, while the annual refresher training provides a review of the initial training program topics as well as any updates to policies, procedures, and/or regulations.

### **2.3 Training Content**

Initially, facility personnel attend a 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training program pursuant to the Occupational Safety and Health Administration (OSHA) regulations, and in accordance with 29 CFR 1910.120 and on-the-job training, as applicable. In addition, an annual 8-hour HAZWOPER refresher training is provided to facility personnel who manage hazardous waste.

The HAZWOPER training provided to facility personnel includes the following topics :

- History and applicability of hazardous waste regulations;
- Responsibilities and liabilities of personnel and the facility;
- Definition of solid and hazardous waste;
- Hazardous waste generator rules;
- Hazardous waste manifest requirements;
- Hazardous waste management procedures;
- Hazards associated with specific waste streams;
- Emergency preparedness and prevention;

- Implementation of the Contingency Plan (response to fires, explosions and/or onsite releases);
- Familiarization with the emergency policies, and response procedures;
- Procedures for using, inspecting, repairing and replacing emergency and monitoring equipment;
- Operating automatic waste feed cut-off systems;
- Responding to communication and alarm systems;
- Shutdown of operations;
- Conducting inspections; and
- Maintaining the required recordkeeping documents.

## **2.4 Additional Training Components**

In addition to HAZWOPER training, facility personnel complete training for some or all of the following items listed below as applicable (list is included as “typical” only and not intended to imply that all training is required):

- Asbestos Awareness: Understanding the Risk
- Back Safety: lift Well, Live Well (video)
- Benzene: Knowledge is Power and Safety
- Bloodborne Pathogens: Take Precautions
- Process Safety: Protecting Employees
- Confined Space Entry: Inside Maneuvers
- Electrical Safety: Working Around Live Circuits
- Electrical Safety for the Qualified Worker
- Stormwater runoff – I Can Make a Difference
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- Eye Protection: See the Whole Picture
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### **3.0 RECORDKEEPING**

The following records and documents are maintained at the facility in either written or electronic format:

- Name of facility personnel and job titles;
- A job description for each facility personnel;
- The type and amount of required training for each job description; and
- Training documentation including initial training and annual refresher training, and training dates.

The “job title” category cross references to a detailed job description that identifies the duties associated with the hazardous waste handling responsibilities and that are required for each job position. The skill, education, or other qualifications, and duties of the personnel assigned to each position are required for each job position, and are also contained in the facility records. The required training modules (listed above) are determined based on the skill level required for each job position and assigned duties.

An electronic filing system is used to track the required training for each facility personnel, based on their specific job requirements and assigned duties, and to schedule refresher training events and dates as needed.

#### **3.1 Record Retention**

Training records at the facility are maintained, at a minimum for:

- Until facility closure for current personnel; and
- At least three years from the date the former personnel last worked at the facility.

Personnel training records may accompany personnel transferred within the same company.



**APPENDIX III.C**  
**FACILITY SECURITY**



**FACILITY SECURITY  
PART B – APPENDIX III.C**

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
PERMIT RENEWAL APPLICATION FOR A HAZARDOUS WASTE  
STORAGE, PROCESSING, AND DISPOSAL FACILITY**

**HAZARDOUS WASTE PERMIT NO. 50025**

**DATE: SEPTEMBER 6, 2024**

**PREPARED FOR:**

**VOPAK LOGISTICS SERVICES USA, INC.  
VOPAK LOGISTICS SERVICES USA DEER PARK  
2759 INDEPENDENCE PARKWAY SOUTH  
DEER PARK, TEXAS 77536**

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## **1.0 INTRODUCTION**

The Security Plan is prepared for the Vopak Logistics Services USA Deer Park facility located at 2759 Independence Parkway South, Deer Park, Texas 77536 (hereafter referred to as VLS or the facility). The Security Plan has been prepared to describe the measures used to maintain security at the facility, as part of complying with the hazardous waste permit, and in accordance with Title 40 of the Code of Federal Regulations Part 264 Subpart B Rule 14 (40 CFR §264.14 – Security).

The objective of the Security Plan is to demonstrate that the facility is secure from the unauthorized entry of persons or livestock onto the active portion of the facility, and to prevent the unknowing entry into the facility.

The facility's security system consists of 24-hour surveillance system, fencing, access control, warning signs, and observations by facility personnel. The facility's security guards are responsible for monitoring and controlling the entry and exit of personnel, visitors, and contractors in addition to the vehicles, to the facility.

Note that VLS is located within the Vopak Deer Park Terminal (referred to as the Terminal) as shown on the drawings provided as part of the permit renewal application.

## **2.0 SURVEILLANCE**

The facility is monitored 24 hours a day, and seven days a week using a surveillance system. The entrances to the Terminal (and thus to the facility) have security guards who check the identification of the individuals accessing the Terminal and each vehicle entering the site (and the facility). The gates remain closed at all times for restricted site access and are opened when authorized.

## **3.0 BARRIERS**

The Terminal is fenced on all sides, except along the Houston Ship Channel where entry is prohibited by the water body. The barrier is made up of a six-foot chain linked fence with three strands of barbed wire extensions.

## **4.0 WARNING SIGNS**

Warning signs in both English and Spanish languages are located strategically along the Terminal's property boundary to alert persons and trespassers of the presence of hazardous waste materials onsite.

## **APPENDIX III.D INSPECTION SCHEDULE**



## **INSPECTION SCHEDULE PART B – APPENDIX III.D**

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
PERMIT RENEWAL APPLICATION FOR A HAZARDOUS WASTE  
STORAGE, PROCESSING, AND DISPOSAL FACILITY**

**HAZARDOUS WASTE PERMIT NO. 50025**

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Table III.D Inspection Schedule

## **1.0 INTRODUCTION**

The Inspection Schedule is prepared for the Vopak Logistics Services USA Deer Park facility located at 2759 Independence Parkway South, Deer Park, Texas 77536 (hereafter referred to as VLS or the facility). The Inspection Schedule has been prepared to describe the schedule used at the facility to inspect the hazardous waste management units, as part of complying with the hazardous waste permit, and in accordance with Title 40 of the Code of Federal Regulations Part 264 Subpart B Rule 15 (40 CFR §264.15 – General Inspection Requirements), 40 CFR §264.33 – Preparedness and Prevention: Testing and Maintenance of Equipment.

### **1.1 Basis**

In addition, the Inspection Schedule has been prepared in accordance with the requirements of:

- 40 CFR §264.174 – Use and Management of Containers: Inspections.
- 40 CFR §264.193 – Tank Systems: Ancillary Equipment Not Having Secondary Containment.
- 40 CFR §264.195 – Tank Systems: Inspections.
- 40 CFR §264.1052 – Subpart BB: Pumps in Light Liquid Service.
- 40 CFR §264.1053(e) – Subpart BB: Compressors.
- 40 CFR §264.1057 – Subpart BB: Valves in Light Liquid Service.
- 40 CFR §264.1058 – Subpart BB: Pressure Relief Devices and Flanges in Light Liquid Service.
- 40 CFR §264.1084 – Subpart CC: Tanks.
- 40 CFR §264.1086 – Subpart CC: Containers.
- 40 CFR §264.1088 – Subpart CC: Inspection and Monitoring Requirements.
- 40 CFR §270.14(b)(5) – General Requirements.
- 40 CFR §270.25(a)(6) – Equipment.

### **1.2 Purpose and Approach**

The objective of the Inspection Schedule is to demonstrate the regularly scheduled activities that will be performed to detect and correct malfunctions, deterioration, operator errors, or discharges that may cause or lead to a release of hazardous waste constituents into the environment or result in a threat to human health.



## **2.0 GENERAL INSPECTION REQUIREMENTS**

The following describes the inspections conducted for the facility's hazardous waste management units. These inspections are designed to monitor the condition of equipment, safety and emergency equipment, operating procedures, and security measures.

### **2.1 Inspection Schedule**

The facility conducts regular inspections for equipment malfunctions, structural deterioration and discharges that could threaten human health or cause or lead to the release of hazardous wastes or hazardous constituents to the environment. The inspection frequency is determined on a unit-specific (or equipment-specific) basis, considering the time necessary to correct problems before human health or the environment are threatened and according to applicable regulatory requirements.

The Inspection Schedule is provided as Table III.D and has been prepared to summarize the inspection items at the facility, and to specify the frequency of the inspection and the potential problems that could be identified. The inspections are performed to detect in a timely manner the potential deficiencies so that appropriate corrective action can be implemented. The inspection frequency (e.g., daily, weekly, monthly, annually) has been developed to provide frequent inspections of units and equipment with the highest potential for deterioration, operator errors, or discharges based on engineering knowledge and operational experience. A central tracking system is in place, and a procedure was developed to ensure that all inspections take place.

### **2.2 Inspection Responsibility**

The inspections are performed by designated, trained facility personnel at the frequency indicated on Table III.D. The Leak Detection and Repair (LDAR) program is conducted by designated, trained hired personnel.

## **3.0 INSPECTION FOLLOW UP**

### **3.1 Corrective Actions**

At the frequency specified in the Inspection Schedule (Table III.D), the inspections are performed using written procedures that include inspection logs and that address, at a minimum, the elements and potential problems listed in the Inspection Schedule. If an inspection identifies that non-emergency maintenance is needed, it will be completed as soon as possible. If a hazard is imminent or has already occurred during the course of an inspection or at any time between inspections, remedial action will be taken immediately pursuant to the Contingency Plan and VLS policy. In the event of an emergency involving the release of hazardous waste to the environment, efforts will be immediately directed toward containing the waste, removing it and subsequently decontaminating the affected area. All items noted as needing corrective action on the inspection log will be addressed, and documentation of the corrective action will be completed on the log.

### **3.2 Recordkeeping**

The inspections will be documented on inspection logs (or forms) that are appropriate for the type of inspections being performed. The completed inspection logs will contain the following items:

- Date and time of inspection;
- Name of inspector;
- Notation of the observations made; and
- Date and nature of corrective actions taken or any other repairs.

The completed inspection logs are filed and retained onsite for at least three years from the date of the inspection.

**TABLE III.D.**  
**INSPECTION SCHEDULE**

**Table III.D- Inspection Schedule**

Facility Unit(s) and Basic Elements	Possible Error, Malfunction, or Deterioration	Frequency of Inspection
Tank Truck Unloading Sumps	Area Surrounding Sumps; Deterioration and Leaks	Daily
Storage Tanks	Area Surrounding Tanks; Tank Deterioration and Piping leaks	Daily
Receiving / Storage / Pretreatment Tanks	Area Surrounding Tanks; Tank Deterioration and Piping leaks	Daily
Process Holding and Pretreatment Tanks	Area Surrounding Tanks; Tank Deterioration and Piping leaks	Daily
Filter Process Feed Tank	Area Surrounding Tank; Tank Deterioration and Piping leaks	Daily
Deepwell Feed Tank	Tank Deterioration and Piping leaks	Daily
Acid Storage Tanks	Area Surrounding Tanks Tank Deterioration and Piping leaks	Daily
Clarifier Tanks	Area Surrounding Tanks; Piping Leaks and Tank Deterioration	Daily
Recovered Oil Tanks	Area Surrounding Tanks Tank Deterioration and Piping leaks	Daily
Container Storage Areas	Leaks and Spills, Liquid in Sump Area, Structure Deterioration, Spills from Trough, Condition of Containers and Covers, Proper Labels, Proper Aisle Space, Accumulation of Precipitation.	Daily
Emulsified Oil Treatment Tanks	Area Surrounding Tanks Tank Deterioration and Piping leaks	Daily
Sludge Dewatering System Tanks	Area Surrounding Tanks Tank Deterioration and Piping leaks	Daily

**Table III.D- Inspection Schedule**

Facility Unit(s) and Basic Elements	Possible Error, Malfunction, or Deterioration	Frequency of Inspection
Filtration Systems and Ancillary	Area Surrounding Tanks Tank Deterioration and Piping leaks	Daily
Filtration System Dumpster Cartridge Filter	Area Surrounding Tanks Tank Deterioration and Piping leaks	Daily
Filtration System Dumpster Filter Press	Area Surrounding Tanks Tank Deterioration and Piping leaks	Daily
Filtration System Dumpster Ancillary	Area Surrounding Tanks Tank Deterioration and Piping leaks	Daily
Equipment (subject to Subpart BB) Pumps, Valves, Pressure Devices and Flanges in Light Liquid Services	Leaks	Monthly Leak Detection and Repair Program
Tanks and Containers (subject to Subpart CC) Covers	Visual Evidence of Holes, Gaps, Tears, Splits, or Bad Seals; Detectable Organic Emissions (by monitoring)	Semi-Annually
Tanks and Containers (subject to Subpart CC) Closed Vent Systems	Leaks	Annually
Tanks and Containers (subject to Subpart CC) Control Devices (flow indicator, temperature monitor)	Malfunction or Not Recording	Daily
Security Devices Fences, Gates, Warning Signs	Integrity, Damage, Presence	Monthly
Operating and Structural Equipment Pumps	Mechanical/Seal Failure, Power Supply Failure, Cracks and Deterioration	Daily

**Table III.D- Inspection Schedule**

Facility Unit(s) and Basic Elements	Possible Error, Malfunction, or Deterioration	Frequency of Inspection
Operating and Structural Equipment Structural Supports	Integrity	Daily
Operating and Structural Equipment Valves, Compressors	Fugitive Emissions	Monthly
Tank Storage Area Ancillary Equipment Firewalls	Cracks, Deterioration	Weekly
Tank Storage Area Ancillary Equipment Base of Foundation	Cracks, Uneven Settlement	Weekly
Tank Storage Area Ancillary Equipment Pipes	Corrosion, Lack of Thickness, Leaks	Weekly
Tank Storage Area Ancillary Equipment Valves	Leaks	Daily
Tank Storage Area Ancillary Equipment Fittings	Leaks	Daily
Tank External	Area Surrounding Tanks	Weekly
Tank External Ladder	Damage, Structural Stability	Weekly
Tank - External Protective Coating, Insulation	Rust Spots, Blister, Deterioration	Weekly
Tanks-External Nozzles	Cracks, Corrosion	Weekly
Loading & Unloading Areas	Leaks, Spills, Deterioration	Daily

**Table III.D- Inspection Schedule**

Facility Unit(s) and Basic Elements	Possible Error, Malfunction, or Deterioration	Frequency of Inspection
Container Storage Areas	Leaks, Spills, Deterioration	Daily
Laboratory Satellite Accumulation Areas	Condition of Containers, Covers and Labels, Leaks, Spills	Daily
Monitoring Equipment liquid Level Indicators, Temperature Gauges, Flow Meters, etc.	Check to Verify Functioning Properly	Daily
Fire Control Equipment Hoses, Water Supply, Fire Trucks, etc.	Check Availability and Condition	Annually
Spill Control and Decontamination Equipment - Generator, Drums, Absorbents, Pumps, Wheel Barrow, Shovels, Brooms, Hoses, Water, etc.	Check Availability and Condition	Weekly
Personnel Safety Equipment Safety Showers	Check for Leaks, Proper Operation	Daily
Personnel Safety Equipment First Aid Kit	Check Availability and Supplies	Weekly
Personnel Safety Equipment Common Supplies (air packs, masks, boots, gloves)	Check Availability and Condition	Weekly

## **APPENDIX III.E CONTINGENCY PLAN**





## **CONTINGENCY PLAN PART B – APPENDIX III.E**

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
PERMIT RENEWAL APPLICATION FOR A HAZARDOUS WASTE  
STORAGE, PROCESSING, AND DISPOSAL FACILITY**

**HAZARDOUS WASTE PERMIT NO. 50025**

**DATE: SEPTEMBER 6, 2024**

**PREPARED FOR:**

**VOPAK LOGISTICS SERVICES USA, INC.  
VOPAK LOGISTICS SERVICES USA DEER PARK  
2759 INDEPENDENCE PARKWAY SOUTH  
DEER PARK, TEXAS 77536**

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## **1.0 INTRODUCTION**

The Contingency Plan is prepared for the Vopak Logistics Services USA Deer Park facility located at 2759 Independence Parkway South, Deer Park, Texas 77536 (hereafter referred to as VLS or the facility). The Contingency Plan has been prepared as part of the hazardous waste permit renewal application for the facility in accordance with Title 40 of the Code of Federal Regulations (CFR) Part 264 Subpart C (Preparedness and Prevention), and Subpart D (Contingency Plan and Emergency Procedures).

### **1.1 Purpose and Approach**

The purpose of this plan is to minimize hazards to human health or the environment from fires, explosions, spills or any other unplanned sudden or non-sudden release of hazardous waste or hazardous constituents to air, soil or surface water. The decision to implement the Contingency Plan will be made by the appropriate personnel based on whether an imminent or actual incident could threaten human health or the environment.

### **1.2 Copies of the Contingency Plan**

Copies of this Contingency Plan and all subsequent revisions will be maintained onsite and as part of the facility files. The Emergency Coordinator (EC) and alternates will be provided with a copy of the plan.

### **1.3 Amendments and Modifications**

Amendments and modifications to the Contingency Plan whenever:

- The plan is found to be deficient during an emergency;
- The facility changes its design, operation, construction and/or management policies and procedures in a way that materially increases the potential for fires, explosions or releases of hazardous wastes constituents, or changes the response necessary in an emergency;
- The list of emergency coordinators changes; or
- The list of emergency equipment changes.

Pursuant to 30 TAC 305, Appendix I, changes in emergency (spill or release) procedures and removal of equipment from the emergency equipment list constitute Class 2 permit modifications. Replacement of equipment with functionally equivalent or upgrades to equipment, equipment relocations and changes in the Emergency Coordinator constitute Class 1 permit modifications. Therefore, although plan amendments may be required as listed above, only these specific changes require Class 1 or 2 modifications.

### **1.4 Plan Applicability**

The Contingency Plan applies to all facilities and equipment within the site that stores or otherwise manage hazardous waste. The Hazardous Waste Contingency Plan is triggered immediately when there is a:

- Release of RCRA hazardous waste which could threaten human health or the environment; and/or
- Fire or explosion in an area or equipment managing hazardous waste.

The Plan includes all areas where hazardous wastes are present, including but not limited to:

- Hazardous waste satellite storage areas;
- Permitted hazardous waste storage areas and tanks; and
- Less than 90-day hazardous waste container storage areas and tanks.

## **2.0 EMERGENCY COORDINATOR**

### **2.1 Emergency Coordinator and Alternates**

The Emergency Coordinators (EC) for the plant are shown in Table III.E.2. The EC or designee must be thoroughly familiar with all aspects of the facility's Contingency Plan, all operations and activities at the facility, the location and characteristics of wastes handled, the location of all records within the facility and the facility layout. In addition, the EC or designee has the authority to commit additional resources needed to carry out the Contingency Plan. Individual responsibilities are outlined in the Line of Communication organizational chart, an example current as of the date of the submittal shown in Figure III.E.1.

### **2.2 Responsibilities of Coordinator**

The EC or designee also have the following responsibilities:

1. Activate the internal facility alarms or communicate to notify personnel as needed, in order to control the emergency.
2. Notify State or local agencies with designated response roles if their help is needed.
3. In case of a release, fire, or an explosion, identify the character, source, amount and areal extent of materials released.
4. Assess possible hazardous to human health or the environment from both direct and indirect exposure.
5. If the EC or designee determines that human health or the environment outside the facility could be threatened, he must:
  - a. Notify local authorities and provide assistance in determining whether evacuation of local areas is necessary; and
  - b. Notify either the government official designated as On-scene Coordinator or the National Response Center (1-800-424-8802) and the Texas Commission on Environmental Quality (TCEQ) Region 12 Office (713-767-3563) and the 24-hour Texas Emergency Response Center (1-800-832-8224) of the emergency, and provide the following information:
    - Name and telephone number of the reporter;
    - Name and address of the facility;
    - Time and type of incident
    - Name and quantity of material involved;
    - Injuries (if any); and
    - Possible hazards to human health or the environment outside the facility.

6. During an emergency, the EC or designee must 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. Those measures must include, where applicable, stopping processes and operations, collecting and containing released wastes, and removing or isolating containers.
7. If the facility halts operations in response to an emergency, the EC or designee must monitor for leaks, pressure buildup, gas generation or rupture in valves, pipes or other equipment, wherever this is appropriate.
8. The EC or designee will monitor pressures, temperatures and flows in the plant. This will be accomplished through control systems and, in the event of a serious emergency, will indicate when to activate either manual shutdown or automatic interlock shutdown.
9. Immediately after the emergency, the EC or designee will provide for treating, storing and disposing of recovered waste, contaminated soil or water.
10. The EC or designee will ensure that, in the affected areas of the facility, no waste that may be incompatible with the released material is treated, stored or disposed of in a manner that could result in mixing of the incompatible waste streams.
11. The EC or designee will ensure that cleanup procedures are completed, and emergency equipment listed in the Contingency Plan is cleaned and fit for its intended use before operations are resumed.

## **3.0 PROCEDURES**

The decision to implement the Contingency Plan depends on whether an imminent or actual incident could threaten human health or the environment. The purpose of this section is to provide guidance to the EC or designee in making this decision by providing decision-making criteria.

### **3.1 Notify Emergency Coordinator**

In the event the facility has a discharge or release of hazardous materials, or a fire or explosion which has the potential for damaging human health or the environment, the first employee detecting such a condition will notify the EC or designee directly by way of 2-way radios.

### **3.2 Evacuate Immediate Area**

Until an authorized EC or designee arrives on the immediate scene of the emergency, the ranking employee present in the operational area where the emergency has occurred will be responsible for directing site personnel to:

1. Evacuate the area by escorting visitors and contractor personnel to an assembly point;
2. Remove all injured personnel and arrange for medical treatment by qualified personnel; and
3. Assemble and prepare to receive response or evacuation directives from outside the evacuated area.

### **3.3 Identify Character, Source and Amount of Release Material**

Once the EC or designee arrives on the immediate scene of the emergency, an investigation of the emergency will be made to assess the character, exact source, amount and areal extent of any released waste material or waste material that is in imminent danger of being released. This will be accomplished by observation and/or review of facility records such as operating logs, waste analyses or manifests and, if necessary, by chemical analysis of the released material. The EC or designee may also utilize reconnaissance into the area to determine the necessary information needed to respond to the incident. The EC or designee will determine the minimum level of personal protective (A, B, C or D as per OSHA requirements, whichever is the most conservative for the situation) equipment necessary for the reconnaissance based upon observation, a review of the facility records and interviews with any eye witnesses or other knowledgeable personnel.

### **3.4 Assess Hazardous to Human Health or the Environment**

The EC or designee will assess the possible hazards to human health or the environment that may result from a release, fire or explosion (e.g., the effects of any toxic, irritating or asphyxiating gases that are generated, hazardous surface run-off due to water or chemical agents used to control fire and heat-induced explosions). The assessment will consider both direct and indirect effects of the waste release, fire or explosion. This assessment will include an evaluation of the type of incident, materials involved, toxicity, potential for gas evolution, wind direction, and existing and anticipated weather conditions. In making this assessment, the EC or designee will utilize facility records on materials being stored or treated including waste analysis data, material safety data sheets and/or analytical testing, and air monitoring equipment, where applicable.



In assessing the danger to the surrounding community, the EC or designee will consider the degree of hazard (toxicity, explosion potential, etc.) and determine the wind direction and approximate speed. This assessment will determine all further actions to be taken. If required, the procedures outlined in the following sections will be implemented.

### **3.5 Evacuation**

Whenever there is an imminent or actual emergency involving a release of waste materials or a potential for fire/explosion due to waste materials that poses a serious danger for plant employees, the EC or designee will activate internal facility alarms or communications systems to notify all personnel/visitors on the site to evacuate. If evacuation is required, the plant will be evacuated in accordance with the procedures specified Section 7.0, Evacuation Plan.

### **3.6 Evacuation of Local Areas**

Upon assessment of the hazards and determination that the possibility exists for serious danger to the surrounding community, the EC or designee will notify Harris County Emergency Coordinator that the emergency at the facility presents a potential threat to surrounding areas (including neighboring facilities which will be contacted directly) and that an evacuation of local areas may be advisable. The EC or designee will be prepared to assist authorities in making the final determination relative to evacuation. This assessment shall consider the effects of toxic, irritating or asphyxiating gases, hazardous surface runoff due to water or chemical agents used to control fire, etc. The final decision to evacuate areas outside of the facility boundaries will be the responsibility of the local authorities.

### **3.7 Notification of Emergency**

Immediate notification requirements, including telephone numbers, are specified in Section 8.1. Other emergency contacts with telephone numbers are shown in Table III.E.1 – Arrangement with Local Authorities.

### **3.8 Prevention of Recurrence or Spread of Fires, Explosions or Releases**

The EC or designee will take all reasonable measures to ensure that fires, explosions or releases do not occur, recur, or spread to other areas including other hazardous waste management areas at the facility. These measures include:

- Stopping process and operations;
- Collecting, containing and treating released materials;
- Removing and/or isolating containers;
- Proper use of fire control structures, systems and equipment to assist in the prevention of recurrence or spread of fires, explosions and releases; and
- Monitoring leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

In the event one of the aforementioned situations occurs, the EC or designee will be notified to assess the severity of the situation and to determine an appropriate course of action in order to avoid further system damage or injury to personnel.

### **3.9 Control Procedures**

Potential accidents generally fall under these classifications:

- Fires
- Explosions
- Spills or material release

Detailed descriptions of emergency response procedures in the three potential accident categories are addressed as follows.

#### **3.9.1 Fires and Explosions**

In the event of a fire or explosion, the first responder will activate the plant alarm and contact the EC. The EC will go to the scene of the fire/explosion and direct fire-fighting activities. Normal fire-fighting procedures and techniques used in the extinguishing hydrocarbon fires will be used at all hazardous waste management areas. Caution should be used due to possible explosion of drummed materials. This potential hazard can be reduced by cooling with water spray.

#### **3.9.2 Spills or Material Release**

##### **3.9.2.1 Storage Tanks**

- Tank Construction – Tanks are designed in accordance with industry standards and practices. The design standards are chosen based on tank material of construction and design conditions (temperature and pressure). No tank is used unless the material of construction is compatible with the material in the tank and conditions such as pressure, and temperature in the tank. The standards include but are not limited to API 650, API 620, ASTM D 3299, and ASME Section 8, Div 1.
- Tank Testing - Each tank is tested according to the requirements of the standard/code that the tank was designed and constructed to meet. Typically, this includes filling the tank with water for a hydrotest. The external surface of each tank is frequently observed by operating personnel for signs of deterioration and/or leaks which might cause a spill or accumulation of material inside the secondary containment area.
- Steam Coils - Some of the tanks have steam injection where the steam becomes part of the tank contents. A few tanks have steam coils. The condensate from the coils drains to a sump in the secondary containment area. The sump is then pumped to a compatible RCRA approved tank within the system.
- Tank Gauging - Each permitted tank is equipped with a minimum of a high-level alarm and gage hatch.

- Tank Inspection - Tanks are routinely inspected externally and internally (when cleaned) by visual observation. Where visual observation detects possible problems, additional nondestructive testing is performed with x-ray, water tests, dye tests, vacuum tests and/or air tests.
- Maintenance - Vopak storage tanks are sand blasted, primed, and painted or re-coated on a periodic basis to minimize shell corrosion.
- Material Compatibility - No tank is used for the storage of any material until the tank material compatibility has been determined.

Hazardous wastes stored in tanks at Vopak are pre-screened by the laboratory prior to acceptance into the waste system. Generator Waste Profiles and waste samples are submitted by customers to Vopak for evaluation and waste stream disposal approval.

The facility pretreatment schemes, and handling procedures are developed in the laboratory. Corrosive materials are reviewed for constituents to assess the compatibility of the waste with the linings in vessels. Sometimes pretreatment and neutralization procedures are implemented before the waste is transferred into steel tankage. Other tests indicate if a waste has a potential to vigorously react, form gases or byproducts, or generate significant heat load. If any of these are identified, procedures that control or eliminate the hazard are implemented to effect safe storage.

Secondary containment or control of any spill that might come from a storage tank is provided by surrounding each tank or group of tanks with a firewall or berm. All of the Vopak operations handling RCRA wastes have secondary containment systems that meet the regulatory requirements for full secondary containment and 24-hour leak detection.

Each enclosed area is provided with catch basins that connect via underground piping to either the segregated or non-segregated underground storm water drains. Control of discharge storm water from the firewall areas to the storm water drainage system is provided by segregated and non-segregated manually operated gate valves that remain closed during activity within that firewall.

#### 3.9.2.2 Pipelines/Valves/Pumps/Hoses

Carbon steel piping that is underground has corrosion protection. All aboveground carbon steel piping is primed and painted. At road crossings, where heavy equipment traffic is allowed, some pipelines are cased for additional protection. Only materials that are compatible with the pipeline material of construction are transferred through the pipeline. Hoses are used for certain transfers in lieu of pipelines. These hoses are specified for material compatibility. Hoses are visually inspected prior to use.

Pumps are provided with suction and discharge block valves to allow the unit to be repaired with minimal loss of material.

Valves in the facility are maintained by greasing and making adjustments for ease of operation. Repairs of packing leaks from valves are conducted through the facility emissions program.

All aboveground pumps, valves, hoses and pipelines are subject to regular visual inspections by operating personnel to check their general condition and for leak detection.

Piping, valves, hoses and pumps are located within tankage firewall areas or in areas where spillage would be collected by the drainage system, wherever possible.

Ship docks at Vopak Facility are equipped with emergency block valves. In the event of an emergency during operations (ex. pipeline/hose rupture), the emergency block valve control button would be manually activated which would shut down dock pipeline transfer operations.

For pipeline spills that cannot be controlled in the above manner at Vopak Facility, the facility would implement the on-site US Coast Guard Spill Response Plan or EPA Spill Response Plan depending on the environment affected. Such plans would be put into activation in order to effectively control spill conditions.

#### 3.9.2.3 Fueling Areas

Facility personnel are present for gauging purposes during the loading of diesel and gasoline tanks as well as during the transfer of these fuels into vehicles and locomotives. The vehicle and locomotive fueling areas within the facility drain to the storm water drainage system.

#### 3.9.2.4 Tank Truck Racks/Stations

During tank truck loading and discharging operations, personnel are present to detect leakage, equipment malfunction, etc., as well as to gauge the tank trailer. Minor leaks may be controlled by placing drip pans under the leak. Major leaks will necessitate shutting down the transfer operation completely.

In the event of spillage from a tank truck loading/unloading rack, the floor of the rack is constructed of concrete, curbed, and sloped to drains that lead to the secondary containment system. Overflow is routed to the segregated or non-segregated storm water drainage systems.

#### 3.9.2.5 Waste Collection/Storage

Spills or other waste materials are collected and stored at authorized areas. Any spillage within drum pad areas is controlled by concrete flooring and drainage routing. Any spillage within the heel collection area is controlled by a concrete curb around the entire facility. Drains that can be opened to the segregated storm water drainage system are located throughout the areas.

#### 3.9.2.6 Off-Site Control

Spills of floating materials that inadvertently reach the Ship Channel may be controlled with the use of spill boom and deployment boats located at the facility.

#### 3.9.2.7 Security

The facility is manned 24 hours a day, 7 days a week by operating personnel. The facility is fenced on all sides accessible by the public. The only gate that remains open is attended by a full-time security guard. The facility is equipped with area lighting throughout.

### **3.10 Decontamination Parameters for Plant Facilities**

After removal of spill residues, the exterior of contaminated tanks, piping and other process or waste management equipment and any contaminated surfaces (secondary containment areas, other paved areas, etc.) will be decontaminated prior to resumption of operations.

### **3.11 Post-Emergency Equipment Maintenance**

After an emergency event, the EC or designee shall verify that all emergency response equipment is cleaned and restored to pre-emergency condition (or replaced as necessary) before operations are resumed in the affected areas of the plant. Equipment which requires decontamination will be decontaminated by using a high-pressure wash, or by another appropriate method such as, but not limited to, a detergent wash. All waste generated during decontamination procedures will be collected, stored, and disposed of either on-site in permitted facilities or off-site at an authorized facility.

Any equipment which cannot be decontaminated will be disposed of off-site in an authorized TSD facility.

### **3.12 Recovery**

After the emergency situation is under control and the area(s) affected by the incident are secured, the EC will determine the proper handling of released material based on safety to personnel and recoverability of the material.

The released material will be directed into the appropriate storage/treatment based on the compatibility of the material with that system. Contaminated soils will be collected, profiled, manifested and disposed of at an authorized TSD.

All emergency equipment used in the affected area will either be decontaminated for reuse, contained in drums for disposal, or segregated into an appropriate solid waste storage bin. At a minimum, decontaminated equipment will be cleaned with a detergent and triple rinsed using non-segregated water. The residues from cleaning equipment will be collected and disposed of in the appropriate treatment system. All equipment or supplies that cannot be reused will be replaced.

The emergency coordinator will notify the Executive Director of the Texas Commission on Environmental Quality (TCEQ) and the TCEQ Regional Office that the facility is in compliance before operations resume in the affected areas.

### **3.13 Incompatible Waste**

The EC or designee will ensure that released waste materials which may be recovered are not mixed with incompatible materials. This evaluation will include, as necessary, a review of the waste materials' characteristics specified by any waste analysis data, material safety data sheets and/or analytical results.

### **3.14 Post-Emergency Equipment Certification**

Before operations are resumed, an inspection of all emergency equipment will be conducted to determine whether all equipment has been restored to pre-incident condition. The Regional Administrator of EPA, Region

IV, and TCEQ Central and Regional offices will be notified that post-emergency equipment maintenance has been performed and operations will be resumed.

The EC or designee will ensure that released waste materials which may be recovered are not mixed with incompatible materials. This evaluation will include, as necessary, a review of the waste materials' characteristics specified by any waste analysis data, material safety data sheets and/or analytical results.

## **4.0 SECONDARY CONTAINMENT REPAIR OR CLOSURE**

### **4.1 Regulatory Requirements and Actions**

If a release from a hazardous waste tank occurs, the regulations require that the tank be closed unless the following provisions are met:

- The cause of the release was a spill that has not damaged the integrity of the system. In this instance, Vopak will return the tank system to service as soon as the released waste is removed, and any necessary repairs are made.
- The cause of the release was a leak from the primary tank system into the secondary containment system. Vopak will repair the system prior to returning the tank system to service.
- The source of the release was a leak to the environment from a component of a tank system without secondary containment. Vopak will provide the component of the system from which the leak occurred with secondary containment that satisfies the secondary containment requirements before it is returned to service, unless the source of the leak is an aboveground portion of a tank system that can be inspected visually.

All leaking components will be repaired and returned to service, unless it is determined that there is a likely potential that the leak may reoccur. If Vopak repairs the equipment, a certification of major repairs will be prepared in accordance with applicable State and Federal requirements. If a component is replaced, it will comply with applicable secondary containment requirements for tank systems.

### **4.2 Certification of Major Repairs**

If a tank system has been repaired and the repair has been extensive (e.g., installation of an internal liner, repair of a ruptured primary or secondary containment vessel), the tank system will not be returned to service unless a certification has been prepared and submitted to the TCEQ from an independent qualified Texas professional engineer that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This certification will be submitted to the TCEQ within seven days after returning the tank system to use.

## **5.0 EMERGENCY EQUIPMENT**

Table III.E.3 Emergency Equipment illustrates the capability to fight fires and address other emergencies.

## **6.0 COORDINATION AGREEMENTS**

Several local response agencies have been provided with a copy of the Facility Contingency Plan to familiarize them with the properties of hazardous waste handled at the facility, the layout of the facility, possible evacuation routes, etc. A copy of the most recent cover letter accompanying the contingency plan is included as Appendix A.

## 7.0 EVACUATION PLAN

The facility utilizes an electrical alarm system that is designed to emit different audible alarm sounds. Facility personnel are trained to understand the different alarm sounds and their alert purpose. Depending on the emergency, a designated alarm tone would be activated and heard throughout the facility that would alert personnel of the emergency response. Activation of the auditory alarm system would be requested of the security gate guard who would activate the necessary alarm signal. In addition, the security guard would inform personnel of the nature of the incident by communicating through the use of a radio announcement. The alarm system signals the facility by sounding off an alarm described as a loud, cycled, sharp horn. Once the alarm is activated, it goes through a continuous alarm cycle that is reset only by the security guard and may be re-activated if requested. A verbal command to evacuate will be given via telephone and/or 2-way radio after the alarm signal is initiated.

The primary evacuation route is through the main gate entrance via existing roadways. Additional routes include the two locked gates at the south end of the facility or the northeast construction gate. These gates can be forced open if necessary. Personnel are to be evacuated from the emergency area as quickly and as orderly as possible without injury. Personnel are required to reassemble at the main entrance so that accountability can be conducted. All personnel will then be instructed as to what plan of action will be taken.

Once the emergency has been controlled, an "all clear" alarm will be given under the direction of the Environmental/Safety Manager or the EC.

The Evacuation Routes are provided in Figure III.E.2.



## **8.0 NOTIFICATION AND REPORTING REQUIREMENTS**

### **8.1 Immediate Notification Requirements**

If the Emergency Coordinator determines that the facility has had a release, fire or explosion which could threaten human health or the environment outside the facility, the TCEQ and National Response Center will be immediately notified by calling:

- TCEQ Region 12 Office: (713) 767-3563
- Texas Emergency Response Center: (800) 832-8224
- National Response Center: (800) 424-8802

The caller will supply the following information to each of these agencies:

- Name and telephone number of the reporter;
- Name, telephone number and address of the facility;
- Time, date and type of incident (e.g., release, fire);
- Identification and quantity of material(s) involved to the extent known;
- The extent of injuries, if any; and
- The possible hazards to human health or the environment outside the facility.

### **8.2 Notification of Resuming Operations in Affected Areas**

Following an emergency situation and prior to resuming operations in an affected area, the owner/operator will notify the Regional Administrator, the TCEQ (Central and Region 12 offices) and appropriate local authorities that cleanup procedures are completed and all equipment listed in the Contingency Plan is cleaned and ready for subsequent use.

### **8.3 Required Reports**

Within 15 days after an incident which required the implementation of the Contingency Plan, written reports must be submitted to:

Regional Administrator  
U.S. EPA, Region VI  
1445 Ross Avenue  
Dallas, Texas 75202-2733

Executive Director  
Texas Commission on Environmental Quality  
P.O. Box 13087  
Austin, Texas 78711-3087

Regional Manager  
Texas Commission on Environmental Quality - Region 12 Office  
5425 Polk St., Suite H  
Houston, Texas 77023-1452

These reports must include:

- a. Name, address and phone number of the owner/operator;
- b. Name, address and phone number of the facility;
- c. Date, time and type of incident;
- d. Name and quantity of materials involved;
- e. Extent of any injuries (if any);
- f. An assessment of actual or potential hazards to human health or the environment; and
- g. Estimated quantity and disposition of recovered material that resulted from the incident.

**TABLE III.E.1**  
**ARRANGEMENT WITH LOCAL AUTHORITIES**

**Table III.E.1- Arrangements with Local Authorities**

## Police: Deer Park Polic Department

Address	2911 Center Street, Deer Park, Texas 77536
Person Contacted	Rhonda Cole
Phone Number	911, or (281) 478-2000 or (281) 930-2100
Agreed Arrangements	Contingency Plan provided when significant changes are made.

## Fire: Deer Park Volunteer Fire Department

Address	2211 East X Street, Deer Park, Texas 77536
Person Contacted	Support Staff
Phone Number	911, or (281) 478-7821
Agreed Arrangements	Contingency Plan provided when significant changes are made.

## Hospital: Deer Park Family Clinic

Address	2910 Center St, Deer Park, Texas 77536
Person Contacted	Administration
Phone Number	(281) 479-5941
Agreed Arrangements	Contingency Plan provided when significant changes are made.

## Other

Organization Name	Harris County Pollution Control Services and Department
Address	101 South Richey, Suite H, Pasadena, Texas 77506
Person Contacted	Director
Phone Number	(713) 920-2831
Agreed Arrangements	Contingency Plan provided when significant changes are made.

**Table III.E.1- Arrangements with Local Authorities**

Hospital: St. Luke's Patients Medical Center

Address	4600 E. Sam Houston Pkwy. South, Pasadena, TX 77505
Person Contacted	Administration
Phone Number	(713) 948-7000
Agreed Arrangements	Contingency Plan provided when significant changes are made.

## Other

Organization Name	Chemical Industry Mutual Aid (CIMA)
Address	PO Box 866 1450 East Boulevard
Person Contacted	Deer Park, TX 7753
Phone Number	Diana Becerra
Agreed Arrangements	CIMA Radio Network
	Contingency Plan provided when significant changes are made.

**TABLE III.E.2**  
**EMERGENCY COORDINATORS**

**Table III.E.2 - Emergency Coordinators (Primary)**

Name	Home Address	Office Phone(s) and/or Pager	Home/Cell Phone(s)
Gary Jackson	6 Loxanhachee Place, Woodlands, TX 77389	(281) 604-6060	(307) 461-1542
Clint McGlynn	1622 N. Yellowstone Dr., Deer Park, TX 77536	(281) 604-6170	(346) 201-9840

**Alternate Emergency Coordinators**

Name	Home Address	Office Phone(s) and/or Pager	Home/Cell Phone(s)
Darrell Hailey	14003 Lake Hollow Dr. Pearland, TX 77584	(281) 604-6168	(832) 528-8199
Shelby Cole	3979 Kennings Rd. Crosby, TX 77532	(281) 604-6042	(346) 203-2446

**TABLE III.E.3**  
**EMERGENCY EQUIPMENT**



**Table III.E.3- Emergency Equipment**

Equipment	Location	Physical Description	Capability
Self-Contained Breathing Apparatus	Fire Station & Disposal Office Area	SCBA's (Scott Pressure Pak II-A) pressure demand unit	Used in vessel entry, fire- fighting, hazardous vapor release
General Safety Supplies	Disposal Office, warehouse	Slicker suits, gloves, goggles, boots, face shields	General safety supplies made available to employees. PPE for handling hazardous materials
Spill Boats	Across from Barge dock #3	(2) 16' long with 35 HP motor & 45 HP motor	Contain spilled material floating on water
Spill Boom	Spill trailer next to Marine Flares	1200' of 18" high spill boom	Contain spilled material floating on water
Fire Extinguishers	Located throughout facility at strategic areas	Portable, Hand Held	Extinguish small spill fires
Fire Monitors	Located throughout the facility at strategic areas	Large, free standing industrial type	Control or extinguish fires
Safety Showers	Located strategically onsite	Standard industrial showers with combined eye wash stations	Wash eyes or shower in case of accidental exposure to hazardous materials
Foam Fire Truck	Truck Kept In Firehouse Extra; 655 Gals. Universal Foam Kept In Main Warehouse Foam Trailer	1500 GPM pumper with 1,000 gals. Universal foam/2,000 ft. fire hose	Control or extinguish fires
Quick Attack #797	Warehouse	200 ft. 5 inch hose w/5 inch Storz couplings 300 ft. 2 ½ hose w/nst 200 ft. 1.75 inch 1,000 gpm monitor w/hydro foam nozzle 80 gals foam 1,250 gpm monitor fog nozzle Blitzfire w/500 gpm fog nozzle	Control of extinguish fires

**Table III.E.3- Emergency Equipment**

Equipment	Location	Physical Description	Capability
Fire Alarm	Sounds from points at each end of the facility	Nitrogen operated alarm horn	Activates emergency plan within the facility
Oil sorbent materials	WWTS control bldg.	Sorbent pads, clay material	Contain leaks, spills
Steel waste drums	VLS drum pad	Empty drums (various sizes)	55-gallon container
Electric pump & cable	WWTS control bldg.	Diesel / Gasoline-powered	300GPM
Portable generator	WWTS control bldg.	Gasoline-powered	500-1500 watts
Wheel barrow	WWTS control bldg.	Standard	30-gallon size
Shovels	WWTS control bldg.	Various	Flat blade
Brooms	WWTS control bldg.	Push and standard	Collect absorbent material
Tools and hoses	WWTS control bldg.	Various	Various
Backhoe	Portable	1 yard capacity	Material moving
Vacuum Truck	Portable	1,800-gallon capacity	Liquid removal

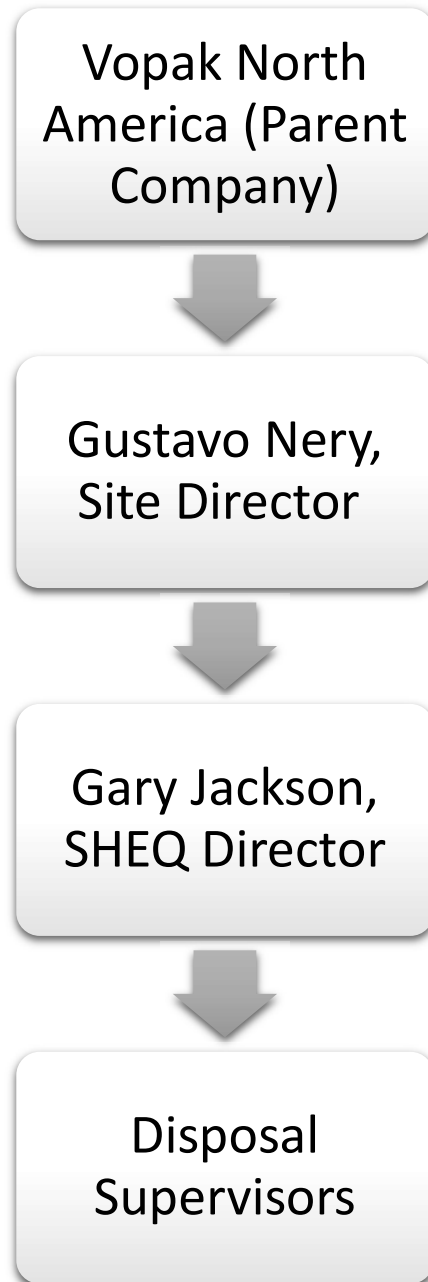
**Table III.E.3- Emergency Equipment**

Equipment	Location	Physical Description	Capability
Self-contained air packs	Truck pad & Deepwell bldg.	Typical industrial	Personnel protection
Gas mask with canister	Main office, WWTS, Deepwell bldg..	Each employee is issued a full face respirator	Personnel protection
Industrial first aid kit	WWTS bldg.	Typical industrial	Personnel protection
Rubber boots	WWTS/deepwell bldg.	Typical industrial	Personnel protection
Slicker acid suits	WWTS/deepwell bldg.	Typical industrial	Personnel protection
Long gauntlet gloves	WWTS/deepwell bldg.	Typical industrial	Personnel protection
Splash goggles	WWTS/deepwell bldg.	Typical industrial	Personnel protection
Hard hats	WWTS deepwell bldg.	Typical industrial	Personnel protection
Acid proof hoods	WWTS/deepwell bldg.	Typical industrial	Personnel protection
Flashlights	WWTS/deepwell bldg.	Typical industrial	Personnel protection
Hoses with high pressure nozzles	Throughout the facility at strategic locations	Typical industrial	Wash down of containment pads, tanks, bunker gear and slicker suits into containment area of decontamination area
Sump pumps	Within Sumps	Concrete	Transfer contaminated water from containment pads to tankage

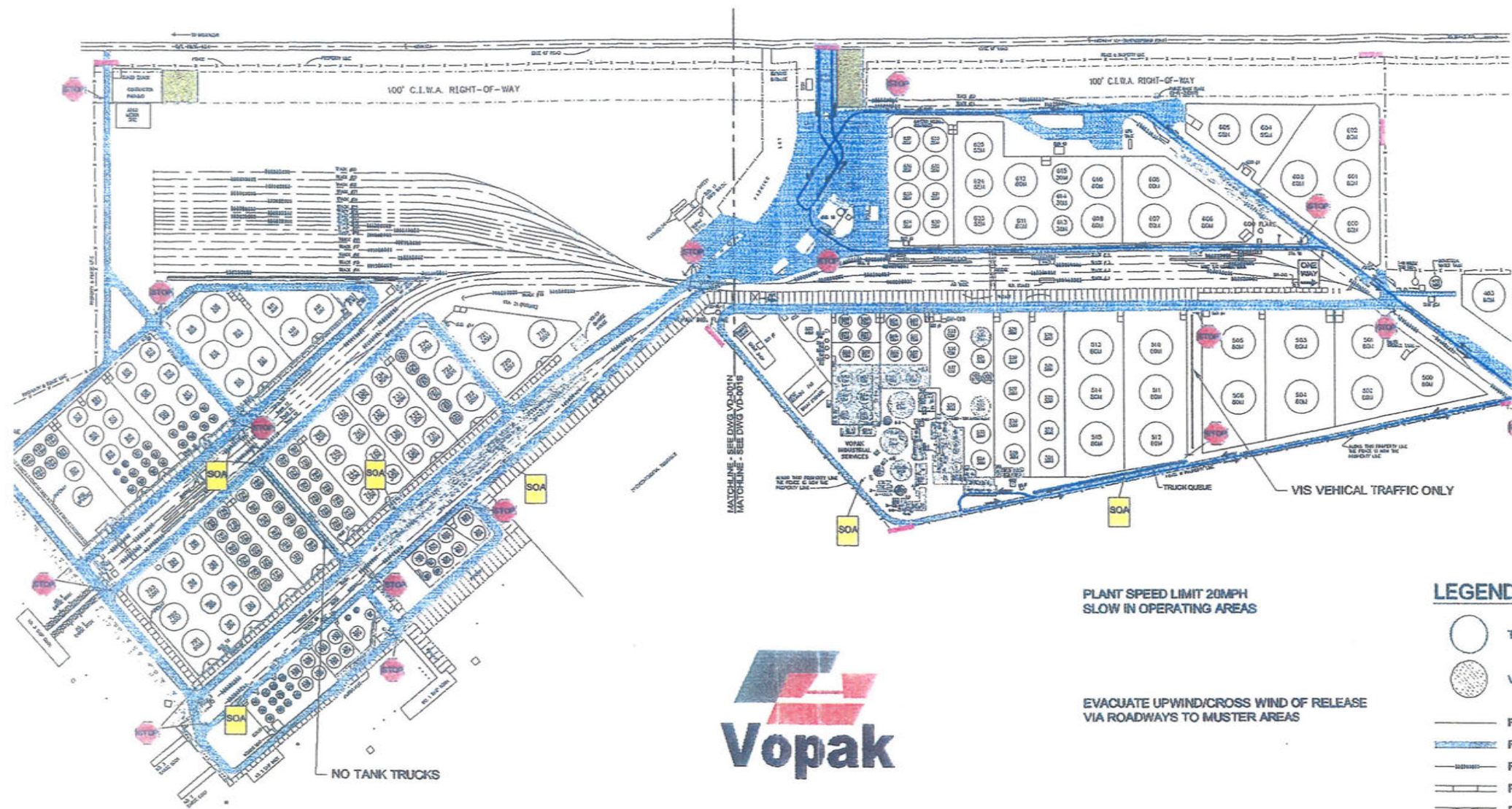
**FIGURE III.E.1**  
**LINE OF COMMUNICATION**

Figure 2-1

**Line of Communication**



**FIGURE III.E.2**  
**EVACUATION ROUTES**



# LEGEND

- T
- V
- F
- F
- F
- F
- C
- E
- R
- S
- S
- E
- C

DATE BY NO.

REVISIONS

DATE BY

DRAWING NUMBER

REFERENCE DRAWINGS



2759 Battleground Road

**ATTACHMENT III.E.1**  
**QUICK REFERENCE GUIDE**



# RCRA Contingency Plan

## Quick Reference Guide:

(1) The types/names of hazardous wastes in layman's terms and the associated hazard associated with each hazardous waste present at any one time (e.g., toxic paint wastes, spent ignitable solvent, corrosive acid);

1. Aqueous waste with low organics in tanks
2. Aqueous waste in tanks
3. Fuels blended in tanks
4. Waste fuels in drums
5. Caustic waste in drums
6. Flammable paint waste in drums
7. Acid waste in drums
8. Toxic organic liquids in drums
9. Spent ignitable solvents in drums

(2) The estimated maximum amount of each hazardous waste that may be present at any one time;

1. Aqueous waste with low organics in tanks - 302,805 Gal
2. Aqueous waste in tanks - 1,008,000 Gal
3. Fuels blended in tanks - 30,250 Gal
4. Waste fuels in drums - 11,000 Gal
5. Caustic waste in drums - 1,650 Gal
6. Flammable paint waste in drums - 2,750 Gal
7. Acid waste in drums - 275 Gal
8. Toxic organic liquids in drums - 275 Gal
9. Spent ignitable solvents in drums - 5Gal



- (3) The identification of any hazardous wastes where exposure would require unique or special treatment by medical or hospital staff;

None at this time. Please note the facility is a TSDF and the waste amount and characterization solely depends on the needs of Vopak Terminal customers' demands for storage.

- (4) A map of the facility showing where hazardous wastes are generated, accumulated and treated and routes for accessing these wastes;

See attached Map #1

- (5) A street map of the facility in relation to surrounding businesses, schools and residential areas to understand how best to get to the facility and also evacuate citizens and workers;

See attached Map #2 and #3. The facility is located within Vopak Terminal Deer Park in the Southern section on 4<sup>th</sup> street

- (6) The locations of water supply (e.g., fire hydrant and its flow rate);

See attached maps #4, #5, #6.

Firewater System Overview Current

Pumps

P-910-01 Electric 3500 gpm

P-910-02 Diesel 6250 gpm

P-300 Diesel Trash Pump 3000 gpm

Total Pumping Capacity is 12,750 gpm

Firewater Line Size is 10" Transite and HDPE for a flow capacity of about 6000 gpm

Water supply is directly drafted from the Houston Ship Channel



(7) The identification of on-site notification systems (e.g., a fire alarm that rings off site, smoke alarms); and

Vopak uses the MOTOTRBO Capacity Plus radio system for daily communication and to report emergencies by radio on channel 1. For communicating emergencies in the plant we use the radio "all call" channel and the Whelen Alarm System PA with 4 different alarms plant wide.

Wail - Fire - similar to a fire siren

Hi Low - Spill/release

Whoop - Emergency - injury or evacuation

Air Horn - All clear

(8) The name of the emergency coordinator(s) and 7/24-hour emergency telephone number(s) or, in the case of a facility where an emergency coordinator is continuously on duty, the emergency telephone number for the emergency coordinator.

Primary:

Gary Jackson

SHEQ Director

Office: 281-604-6060

Mobile: 307-461-1542

Secondary:

Clint McGlynn

Disposal Manager

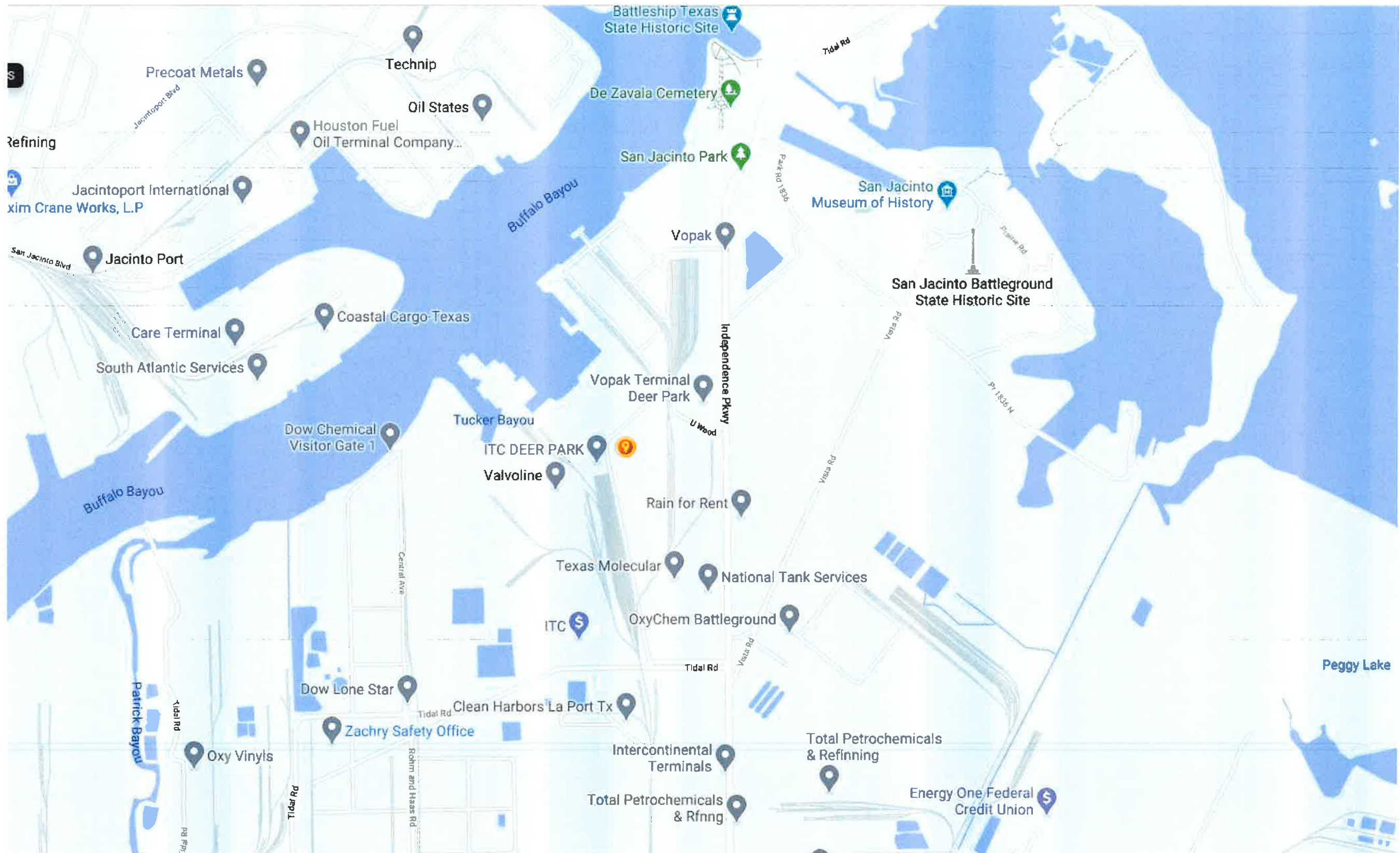
Office: 281-604-6170

Mobile: 346-201-9840

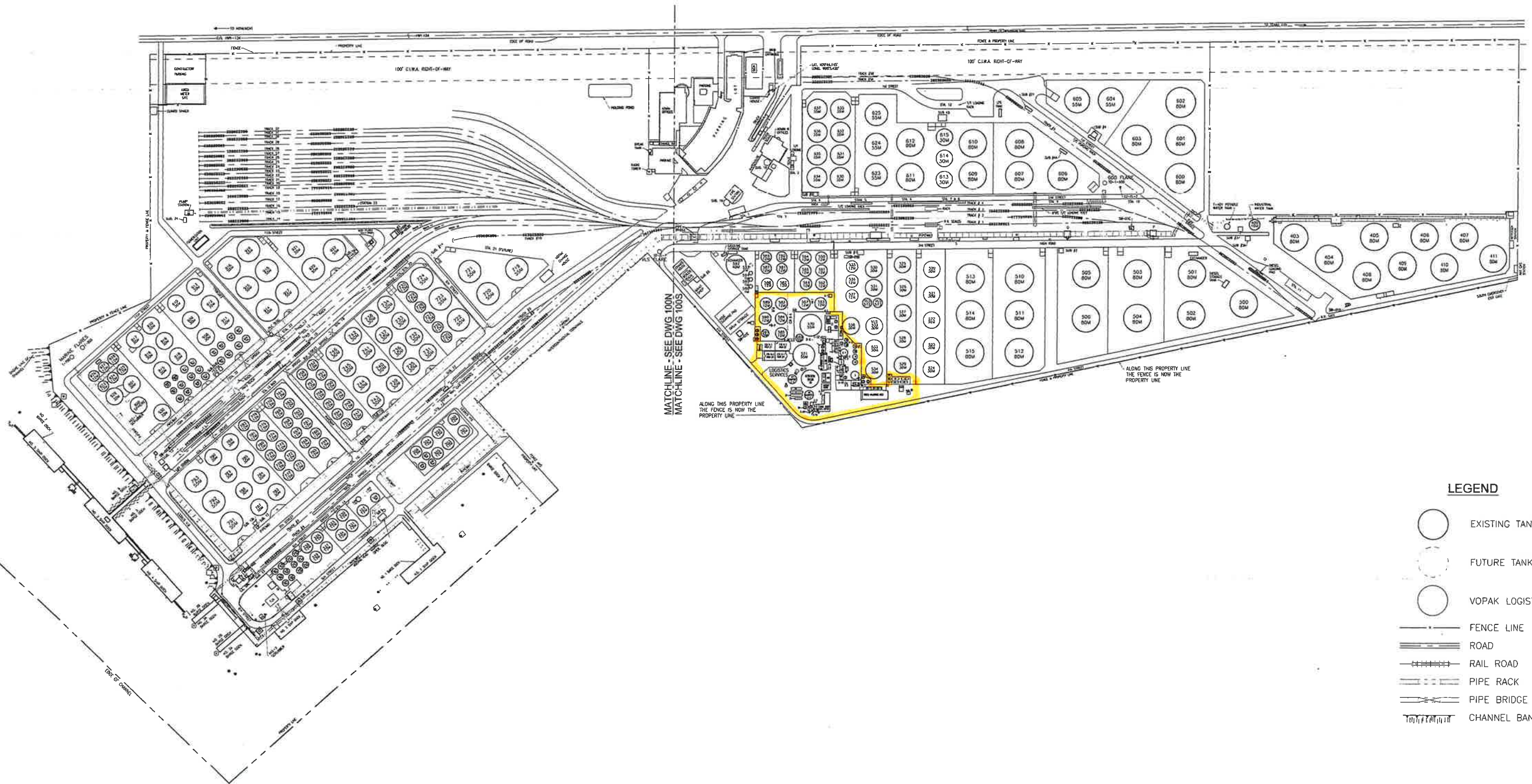
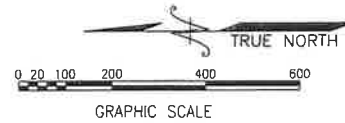












LEGEND

- EXISTING TANKAGE
- FUTURE TANKAGE
- VOPAK LOGISTICS SERVICES
- FENCE LINE
- ROAD
- RAIL ROAD
- PIPE RACK
- PIPE BRIDGE
- CHANNEL BANK

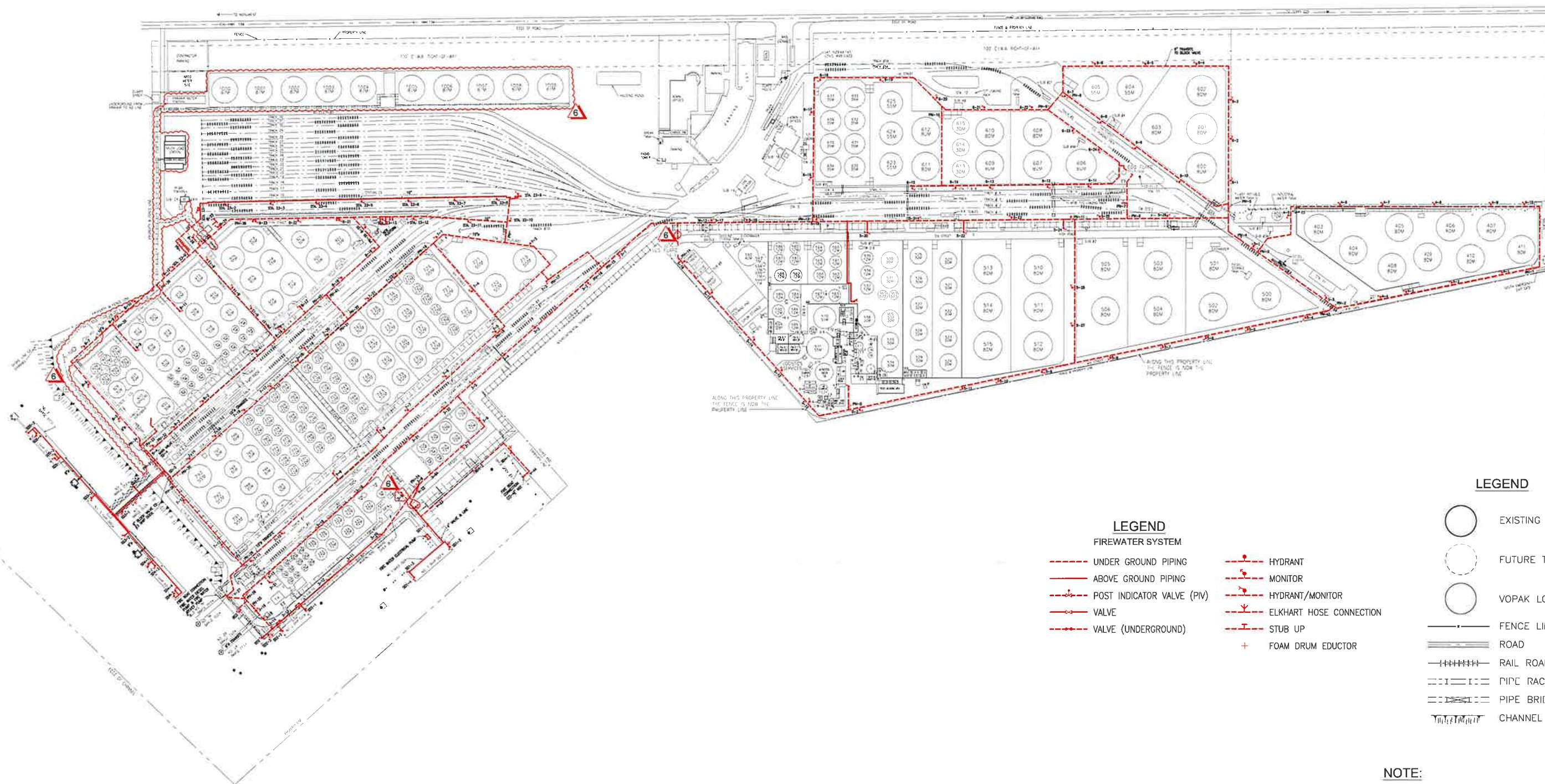
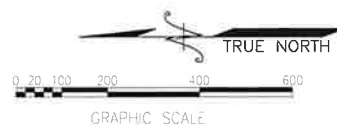
Revisions					Revisions					Revisions					Revisions					Revisions				
No.	Revision	Date	By	App.	No.	Revision	Date	By	App.	No.	Revision	Date	By	App.	No.	Revision	Date	By	App.	No.	Revision	Date	By	App.
7	UPDATED AS PER A. TRIPLETT	8/1/05	JAM	AJT	15	UPDATED CAD FILE	8/1/05	JAM	AJT	22	UPDATED 117, 117S, & 117N FH & FW COVERAGE AREAS	8/1/05	JAM	AJT	29	UPDATED 111 ELEC CLASS, DOCK CLASSIFICATION	8/1/05	JAM	AJT	36	UPDATED 111 ELEC CLASS, DOCK CLASSIFICATION	8/1/05	JAM	AJT
6	ADDED T-929 & T-930	8/1/05	JAM		14	ADDED ETHANOL RACK	8/1/05	JAM	AJT	21	UPDATED 101 FW, 102S SWR, & 108 S IND WATER LINES	8/1/05	JAM	AJT	28	ADDED EQUIPMENT LOCATION PLAN DRAWING TO FILE	8/1/05	JAM	AJT	35	UPDATED NEW ADMIN. BLDG, PARKING & ADDED NEW DOCKS	8/1/05	JAM	AJT
5	ADDED TRACK 31 & 32	8/1/05	JAM		13	UPDATED SAFETY EQUIPMENT DRAWING (CAD FILE)	8/1/05	JAM	DH	20	UPDATED 101 FW, 102S SWR, & 108 S IND WATER LINES	8/1/05	JAM	AB	27	UPDATED DIESEL LOADING PAD LOCATION	8/1/05	JAM	TT	34		8/1/05	JAM	
4	ADDED T-535	8/1/05	JAM		12	UPDATED PLANT ENTRY	8/1/05	JAM	AB	19	ADDED EQUIPMENT LOCATION PLAN DRAWING TO FILE	8/1/05	JAM	AB	26		8/1/05	JAM		33		8/1/05	JAM	
3	ADDED VOPAK INDUSTRIAL DESIGNATION	8/1/05	JAM		11	UPDATED PIPE RACK & DOCK LOCATIONS	8/1/05	JAM	AB	18	ADDED EQUIPMENT LOCATION PLAN DRAWING TO FILE	8/1/05	JAM	AB	25		8/1/05	JAM		32		8/1/05	JAM	
2	ADDED & REVISED R.R. TRACK NUMBERS	8/1/05	ABG		10	GENERAL DRAWING UPDATES	8/1/05	JAM	AB	17	UPDATED NEW ADMIN. BLDG, PARKING & ADDED NEW DOCKS	8/1/05	JAM	AB	24		8/1/05	JAM		31		8/1/05	JAM	
1	REVISED VOPAK INDUSTRIAL AREA	8/1/05	JAM		9	UPDATED FLARE 02-F-2	8/1/05	JAM	AB	16	UPDATED DIESEL LOADING PAD LOCATION	8/1/05	JAM	TT	23		8/1/05	JAM		30		8/1/05	JAM	
0	ISSUED FOR APPROVAL	8/1/05	JAM		8	UPDATED PIT DESIGNATIONS	8/1/05	JAM	AJT	16	UPDATED DIESEL LOADING PAD LOCATION	8/1/05	JAM	TT	22		8/1/05	JAM		29		8/1/05	JAM	

Engineer:		H & M DESIGN, INC.		Ph # (281) 930-8750	
Design By:		J. MACIAS		Fax # (281) 930-8711	
Checked By:		A. BRALY		E-mail: hmd@hmd-inc.com	
Engineer Job No.:		1630-Vd			
Date:		01/12/06			
Project Manager:		A. BRALY			
Approved by:					
Vopak Engineer:		A. BRALY			
Date:					

Vopak		VOPAK TERMINAL DEER PARK, INC.	
Project Title:			
Drawing Title:		OVERALL SITE PLAN	
Drawing Scale:		1"=200.0'	
Graphic Scale:			
Drawing Number:		DP-05-213-PP-100-Rev 22	

#3









**LEGEND**  
FIREWATER SYSTEM

- UNDER GROUND PIPING
- ABOVE GROUND PIPING
- POST INDICATOR VALVE (PIV)
- VALVE
- VALVE (UNDERGROUND)
- HYDRANT
- MONITOR
- HYDRANT/MONITOR
- ELKHART HOSE CONNECTION
- STUB UP
- FOAM DRUM EDUCTOR

**LEGEND**

- EXISTING TANKAGE
- FUTURE TANKAGE
- VOPAK LOGISTICS SERVICES
- FENCE LINE
- ROAD
- RAIL ROAD
- PIPE RACK
- PIPE BRIDGE
- CHANNEL BANK

**NOTE:**  
ALL LINES ARE 12"Ø UNLESS NOTED OTHERWISE.

No.	Revision	Date	By	App.	No.	Revision	Date	By	App.	No.	Revision	Date	By	App.	Drawing Number	Reference Drawings	Engineer:				 VOPAK TERMINAL DEER PARK, INC.	
6	ADDED T-1000 THRU T-1009, PRAXAIR MEYER STATION	04/20/2006	JAM												101N 101S	FIRE WATER SYSTEM - NORTHERN SECTION FIRE WATER SYSTEM - SOUTHERN SECTION	Design By:  H+M INDUSTRIAL EPC 5820 Center Street Pasadena, Texas 77505 Ph # (281) 930-8750 Fax # (281) 930-8711 E-mail: h+m@h+m-ec.com				 H+M INDUSTRIAL EPC 1630-Vd Vopak Engineer: A. BRALY	
5	UPDATED FIRE WATER SYSTEM AS SHOWN	04/20/2006	EA														Drawn By: J. MACIAS Checked By: A. BRALY Engineer Job No.:		Date: MAR 2006 Date:		Project Manager: A. BRALY Approved by:	
4	UPDATED FIRE WATER SYSTEM AS SHOWN	04/20/2006	EA																Date:		Date:	
3	ADDED NEW FIRE WATER LINES	04/20/2006	JAM	AJT																		
2	UPDATED FIRE WATER SYTEM	04/20/2006	JAM	DH																		
1	REVISED SITE PLAN & CHANGED DRAWING NUMBER	04/20/2006	JAM	AB																		
0	ISSUED	04/20/2006	JAM																			
																	Drawing Scale: 1"=200.0'		Graphic Scale: 		Drawing Number: DP-05-213-PP-101-Rev 6	

#4





### LEGEND

#### FIREWATER SYSTEM

- UNDER GROUND PIPING
- ABOVE GROUND PIPING
- POST INDICATOR VALVE (PIV)
- VALVE
- VALVE (UNDERGROUND)
- HYDRANT
- MONITOR
- HYDRANT/MONITOR
- ELKHART HOSE CONNECTION
- STUB UP
- FOAM DRUM EDUCTOR

### LEGEND

- EXISTING TANKAGE
- FUTURE TANKAGE
- VOPAK LOGISTICS SERVICES
- FENCE LINE
- ROAD
- RAIL ROAD
- PIPE RACK
- PIPE BRIDGE
- CHANNEL BANK

NOTE:  
ALL LINES ARE 12"Ø UNLESS NOTED OTHERWISE.

No.	Revision	Date	By	App.	Engineer
5	UPDATED FIRE WATER SYSTEM DOCKS 4&5	3/1/06	JM	EA	
4	UPDATED FIRE WATER SYS. DOCKS 4&5, ANNOTED STA 23	3/1/06	JM	EA	
6	ADDED T-1000 THRU T-1009, PRAXAIR METER STATION	3/1/06	JM	JAM	

Drawing Number	Reference Drawings
101	FIRE WATER SYSTEM - OVERALL
101S	FIRE WATER SYSTEM - SOUTHERN SECTION

Design By: J. MACIAS	Date: MAR 2006	Checked By: A. BRALY	Date: MAR 2006	Approved By: A. BRALY	Date: MAR 2006
Engineer Job No. 1:	1630-Vd	Vopak Engineer: A. BRALY	Date:		

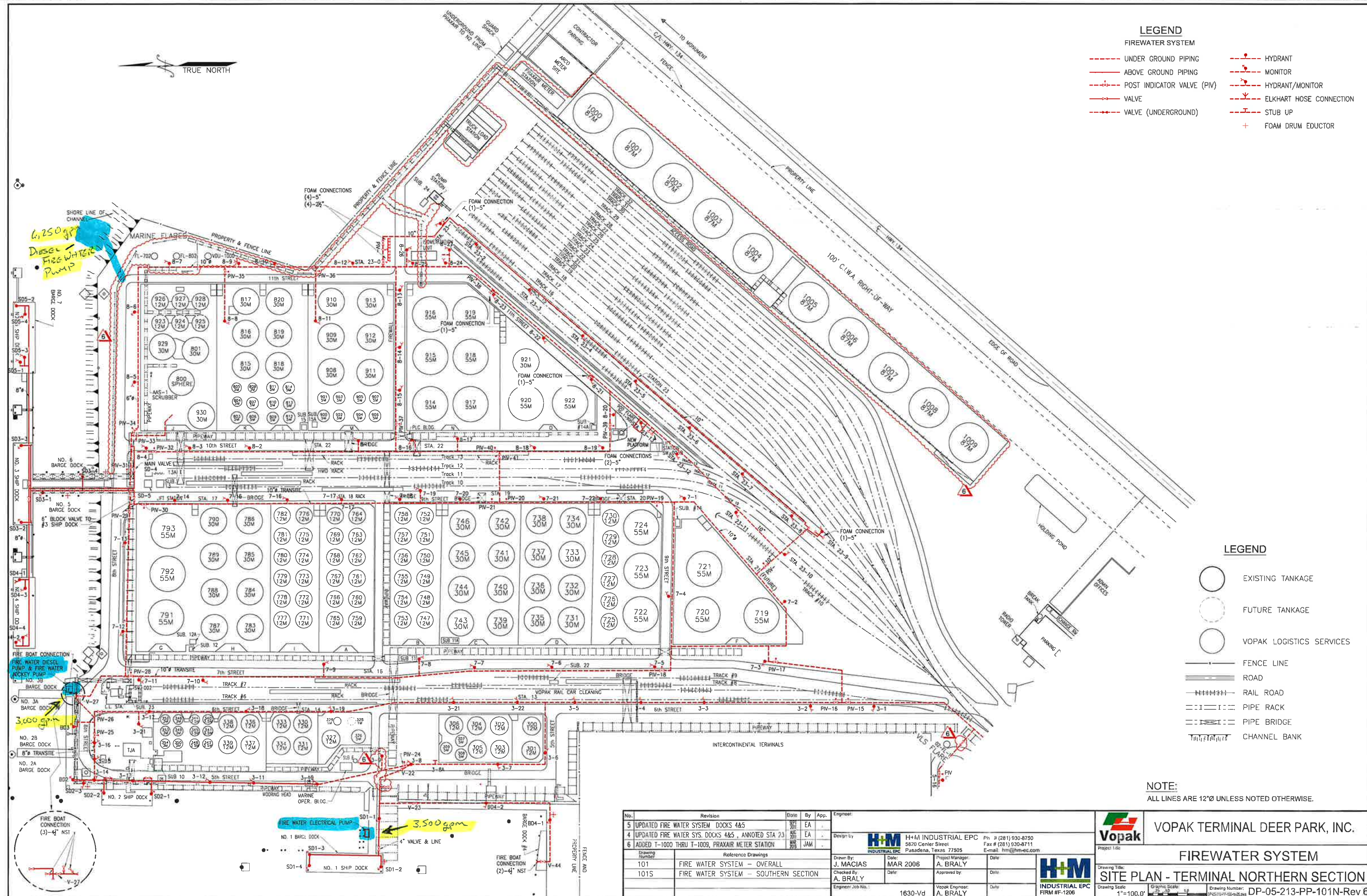


VOPAK TERMINAL DEER PARK, INC.

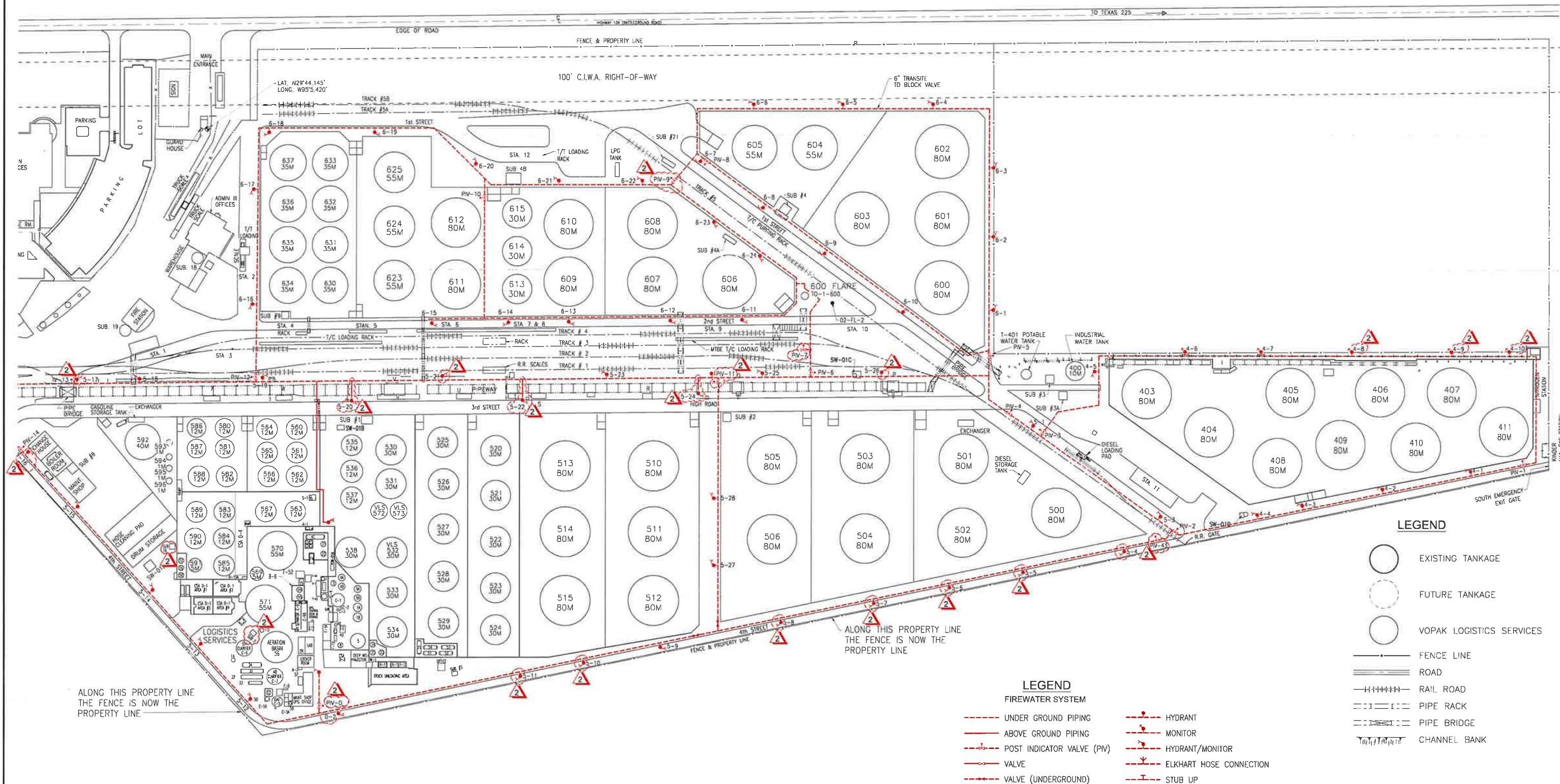
### FIREWATER SYSTEM

### SITE PLAN - TERMINAL NORTHERN SECTION

Drawing Scale: 1"=100.0' Graphic Scale: 1"=100.0' Drawing Number: DP-05-213-PP-101N-Rev 6







ALONG THIS PROPERTY LINE  
THE FENCE IS NOW THE  
PROPERTY LINE

ALONG THIS PROPERTY LINE  
THE FENCE IS NOW THE  
PROPERTY LINE

#### LEGEND FIREWATER SYSTEM

- UNDER GROUND PIPING
- ABOVE GROUND PIPING
- POST INDICATOR VALVE (PIV)
- VALVE
- VALVE (UNDERGROUND)
- HYDRANT
- MONITOR
- HYDRANT/MONITOR
- ELKHART HOSE CONNECTION
- STUB UP

#### LEGEND

- EXISTING TANKAGE
- FUTURE TANKAGE
- VOPAK LOGISTICS SERVICES
- FENCE LINE
- ROAD
- RAIL ROAD
- PIPE RACK
- PIPE BRIDGE
- CHANNEL BANK

NOTE:  
ALL LINES ARE 12"Ø UNLESS NOTED OTHERWISE.

No.	Revision	Date	By	App.	Drawing Number	Reference Drawings
2	UPDATED FIRE WATER SYSTEM	NOV 2006	JAM	OH		
1	REDRAWN & CHANGED DRAWING NUMBER	SEP 2006	JAM	AB	101	FIRE WATER SYSTEM - OVERALL
0	ISSUED	SEP 2006	JAM		101N	FIRE WATER SYSTEM - NORTHERN SECTION

Engineer:	
Design By:	H+M INDUSTRIAL EPC 5820 Center Street Pasadena, Texas 77505
Ph # (281) 930-8750 Fax # (281) 930-8711 E-mail: hm@hm-ec.com	
Drawn By:	J. MACIAS
Date:	MAR 2006
Project Manager:	A. BRALY
Checked By:	A. BRALY
Approved by:	
Date:	
Engineer Job No.:	1630-Vd
Vopak Engineer:	A. BRALY
Date:	

	VOPAK TERMINAL DEER PARK, INC.
Project Title:	FIRE WATER SYSTEM
Drawing Title:	SITE PLAN - TERMINAL SOUTHERN SECTION
Drawing Scale:	1"=100.0'
Drawing Number:	DP-05-213-PP-101S-Rev 2

**APPENDIX III.F**  
**EMERGENCY RESPONSE PLAN**

This is not applicable to the facility.

## **SECTION IV – WASTE ANALYSIS PLAN**

## 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).

### 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.

### 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.

### 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 of



the 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.

## **APPENDIX IV**

### **WASTE ANALYSIS PLAN**



## **WASTE ANALYSIS PLAN PART B – SECTION IV.B**

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
PERMIT RENEWAL APPLICATION FOR A HAZARDOUS WASTE  
STORAGE, PROCESSING, AND DISPOSAL FACILITY**

**HAZARDOUS WASTE PERMIT NO. 50025**

**DATE: SEPTEMBER 6, 2024**

**PREPARED FOR:**

**VOPAK LOGISTICS SERVICES USA, INC.  
VOPAK LOGISTICS SERVICES USA DEER PARK  
2759 INDEPENDENCE PARKWAY SOUTH  
DEER PARK, TEXAS 77536**



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## TABLES

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Table IV.C Sampling and Analytical Methods

## **LIST OF ACRONYMS AND ABBREVIATIONS**

ASTM	American Society for Testing and Materials
CFR	Code of Federal Regulations
DWIS	Disposal Well Injection System
EOTS	Emulsified Oil Treatment System
EPA	Environmental Protection Agency
GWP	Generator Waste Profile
LDR	Land Disposal Restriction
MSDS	Material Safety Data Sheet
NFPA	National Fire Protection Association
NORM	Naturally occurring radioactive material
PCB	Polychlorinated biphenyl
ppm <sub>w</sub>	Parts per million, by weight
ppm <sub>v</sub>	Parts per million by volume
PWO	Plant Work Order
QA/QC	Quality Assurance/Quality Control
SOP	Standard Operating Procedure
TAC	Texas Administrative Code
TPDES	Texas Pollutant Discharge Elimination System
TSDF	Treatment, Storage and/or Disposal Facility
UIC	Underground Injection Control
VAM	Vopak Analytical Method
VLS	Vopak Logistics Services USA Deer Park
WAP	Waste Analysis Plan
WWTS	Wastewater Treatment System

## GENERAL DEFINITIONS

**Buffer Zone:** The required distance from a unit to a property boundary or other defined point.

**Containerized:** Material which is in a pail, drum, tote, bin or other similar container.

**Fingerprint Analysis:** Analyses performed on waste receipts.

**Fingerprint Value:** Results of fingerprint analyses; used to confirm characteristics of received waste.

**Generator Waste Profile:** A certified document by which the generator of a waste stream declares the physical and chemical properties, chemical composition, EPA waste codes, and other important information.

**PCB Materials or Waste:** A substance that contains any combination of PCB isomers.

**Plant Work Order:** Includes results of laboratory analyses and provides operators with information needed to properly manage the waste.

**Polychlorinated biphenyl:** A family of compounds produced commercially by directly chlorinating biphenyl; chlorine atoms can be present at any or all of 10 sites.

**Product heel:** A material remaining in a container that is a viable commercial chemical product.

**Profile:** Generator Waste Profile or GWP.

**Profiling Analyses:** Basic analytical tests for characterizations of wastes for suggestive determination of the appropriate treatment, storage and disposal methods, as defined by the laboratory on a waste specific basis.

**Supplemental Analysis:** Performed in addition to Profiling Analysis; results of these tests are used to provide operational control.

**Trier:** Scoop, as specified in SW-846, sampling section.

**Unique Procedures:** VLS-developed analytical methods used when no EPA-approved method is available.

**Vopak Terminals:** Sister companies to Vopak Logistics Services USA Deer Park

**Waste heel:** A material remaining in a container that is empty, as defined in 40 CFR §261.7, that formerly contained a RCRA manifested waste.

## 1.0 INTRODUCTION

The Waste Analysis Plan (WAP) is prepared for the Vopak Logistics Services USA Deer Park facility located at 2759 Independence Parkway South, Deer Park, Texas 77536 (hereafter referred to as VLS or the facility). The Waste Analysis Plan has been prepared to specify the methods and procedures used to analyze hazardous waste as part of complying with the hazardous waste permit and in accordance with Title 40 of the Code of Federal Regulations Part 264 Subpart B Rule 13 (40 CFR §264.13 – General Waste Analysis) and 40 CFR §268.7 (Testing, Tracking and Recordkeeping Requirements for Generators and Disposal Facilities).

### 1.1 Basis

In addition, the WAP has been prepared in accordance with the requirements of:

- 40 CFR §264.17 – General Requirements for Ignitable, Reactive or Incompatible Wastes.
- 40 CFR §264.314 – Special Requirements for Bulk and Containerized Liquids.
- 40 CFR §264.1034 – Test Methods and Procedures.
- 40 CFR §264.1063(d) – Subpart BB: Equipment Leaks.
- 40 CFR §264.1083 – Subpart CC: Tanks and Containers.
- 40 CFR §146.68 – Monitoring and Testing Requirements (Underground Injection Wells).
- 30 TAC §331.64 – Monitoring and Testing Requirements (Underground Injection Wells).

### 1.2 Purpose and Approach

The objective of the WAP is to specify the methods and procedures to be utilized to obtain all information necessary to properly treat, store, and/or dispose of hazardous wastes generated and received at the facility.

To achieve this objective, the WAP will be used as the basis for detailed facility procedures to:

- Characterize the generated waste streams;
- Develop waste management plans for storage, treatment, and/or disposal of generated and received wastes;
- Identify whether the waste is subject to land disposal restrictions and provide proper notification thereof, if the waste is sent offsite for disposal;
- Address the requirements of RCRA Subparts BB and CC;
- Address the requirements for management of reclaimed oils and solvents and for PCB wastes;
- Evaluate wastes upon receipt from offsite sources;
- Periodically re-evaluate existing waste streams as process, composition or regulations change that could affect storage, handling and/or disposal procedures;
- Ensure that all waste movement throughout the facility is monitored and controlled;
- Utilize appropriate sampling and analytical QA/QC procedures; and
- Address requirements for monitoring UIC Operations.

### **1.3 Amendments to WAP**

This WAP will be reviewed and amended (and a permit modification requested, as necessary) whenever:

- Regulations change that affect the WAP;
- Sampling or analytical methods change that affect the WAP; or
- Facility operations or waste analysis practices vary significantly from the specifications of the WAP.

## **2.0 Identification of Hazardous Waste Streams**

### **2.1 Description of Facility Operations**

VLS is a waste generator and receiver of waste generated offsite from sister companies and other industrial and municipal sources. VLS has facilities for biological treatment (subject to state and federal water quality [TPDES] permit), physio-chemical treatment, dewatering, filtration, solidification fixation, waste oil and solvent blending, and a disposal well (subject to Underground Injection Control, or UIC permit).

### **2.2 Waste Streams Managed**

Table IV.B lists wastes managed in permitted units at the facility as of the date of this WAP. Generated and received wastes are listed separately. Most of the wastes generated by VLS are from the processing of received waste streams and/or cleaning and maintenance activities associated with transport vehicles or equipment used to manage the received waste onsite.

Received waste streams are included in broad categories that represent the extent of the waste accepted at the facility. Prior to generation or management of any waste stream, the waste is characterized using analysis and/or process knowledge. The following documents are maintained as part of the facility files:

- Waste analytical data, characterization forms;
- Safety Data Sheets (as available);
- Land Disposal Restriction Certifications (if applicable); and
- Additional documentation for each waste stream including documentation of process knowledge used in characterizing the waste.

### **2.3 Description of Processes**

A general description for onsite processing of waste may include but is not limited to the following:

- Biodegradable wastes are routed to the wastewater treatment facility, or pretreated to reduce contaminants, remove oil, solvents, metals and reactive constituents prior to routing to the wastewater treatment facility.
- Waste streams destined for the onsite disposal well are pretreated to remove organics and to treat emulsions, corrosivity or reactive components and then are pH adjusted and filtered.
- Waste oils and solvents may be blended for offsite disposal at permitted facilities.
- Sludge may be dewatered to reduce volume.
- Containerized solids may be bulked into larger containers and/or solidified for disposal at permitted facilities, or may be sent as is to permitted facilities.

### **3.0 Identification of Waste Management Tolerance Limits**

To ensure the proper handling of waste in permitted units, tolerance limits for each waste management unit type are determined by analysis. Specifically, precautions will be taken to prevent:

- Accidental ignition or reaction of ignitable or reactive waste;
- Generation of extreme heat or pressure, fire or explosions or violent reactions;
- Production of uncontrolled toxic mists;
- Fumes, dusts or gases in sufficient quantities to threaten human health or the environment; and
- Damage to the structural integrity of the unit.

#### **3.1 Tank Storage**

##### **3.1.1 Wastewater Treatment System**

Prior to acceptance of a waste stream, VLS established a processing treatability in accordance with the Generator's Waste Profile (GWP). During this step, VLS compares physical and chemical parameters of the waste streams to determine the compatibility issues. Waste streams that are found to be incompatible are handled separately to prevent accidental mixing. In addition, waste streams are evaluated to ensure that they are compatible with the vessel's materials of construction.

##### **3.1.2 Disposal Well Injection System**

Prior to acceptance of a waste stream, VLS establishes a processing treatability in accordance with the GWP. During this step, VLS compares physical and chemical parameters of the waste streams to determine compatibility issues. Waste streams that are found to be incompatible are handled separately to prevent accidental mixing. In addition, waste streams must be compatible with the vessel's materials of construction.

##### **3.1.3 Fuels Blending System**

Waste to be stored in tanks must be compatible with other waste already in the vessel. Prior to initial mixing, physical compatibility tests are conducted to ensure that violent reactions will not result from combining or mixing the waste streams. Waste streams found to be incompatible are handled separately to prevent accidental mixing. In addition, waste streams must be compatible with the vessel's materials of construction.

Ignitable waste streams are stored in tanks equipped with vapor control devices to minimize vapor accumulations. Such waste is isolated from ignition sources. Cutting, welding, open flames, frictional heat, hot surfaces or other ignition sources in the areas where ignitable wastes are stored or otherwise handled are prohibited. Any repair work requiring welding, cutting or other heat or spark generating activities will only be performed after the removal of ignitable waste from the immediate area of concern and an internal permit issued for such activity. Smoking is prohibited throughout the facility. All possible sources of static, electrical or mechanical sparking incorporate applicable prevention devices to eliminate this potential ignition source.



Buffer zones between tanks containing possible ignitable waste conform to NFPA 30, Flammable and Combustible Liquids Code.

### **3.2 Container Storage**

Container type for generated wastes is selected based on waste compatibility with container material considerations. All containers are labeled to enable immediate identification of their contents. Compatibility is determined by the GWP and the Department of Transportation (DOT) marking and labeling on each drum. Incompatible containerized waste streams are stored in separate storage areas separated by concrete curbs.

## 4.0 Sampling and Analysis

### 4.1 Characterization of Received Wastes

#### 4.1.1 *Waste Characterization Prior to Receipt*

Pre-acceptance testing is performed prior to receiving an offsite waste using:

- A sample of the waste; if the sample was collected by the generator, a representative sample certification; and
- A completed GWP.

Laboratory and/or qualified personnel:

- Completes the Profiling Analysis (required for all received wastes);
- Determines which of the Supplemental Analyses (required for certain wastes at the discretion of the Laboratory) are required to adequately characterize, store, treat and/or dispose of the waste;
- Defines the “fingerprint” analysis to be required upon receipt of the waste.

The facility procedures identify monitoring requirements during onsite waste management and ensure that the final treatment/management information from the Laboratory is included on a Plant Work Order (PWO). The facility procedures also ensure compatibility with the facility surface materials of construction and with the facilities to be used for final disposal. This treatment/management information is reviewed by Operations prior to initial receipt and treatment of the waste to ensure that proper waste management practices are specified.

Pre-acceptance procedures vary, as appropriate, at the discretion of the VLS Laboratory or VLS Operations for the following special materials:

- Containerized waste.
- Commercial products or chemicals off specification, outdated, contaminated or banned, including products voluntarily removed from the market place by a manufacturer or distributor in response to allegations of adverse health effects associated with product use.
- Residue and debris from cleanup of spills and releases of single chemical substance, commercial product or a single waste which would otherwise qualify as a special material.
- Waste produced by the mechanical processing of fruit, vegetables or grain, including such wastes as rinds, hulls, husks, pods, shells and chaff. Food processing wastes which are aqueous or sludge, or which have been contaminated with dyes, additives or preservatives are wastes, but not special material.
- Pumping from septic tanks used exclusively by dwelling units: Single family homes, duplexes, apartment buildings, hotels, or motels.

- Sludge from a publicly owned sewage treatment plant serving primarily domestic users with no substantial industrial or chemical contamination.
- Grease trap wastes from residences, restaurants or cafeterias not located at industrial facilities.
- Wastewater wastes from commercial car washes, excluding facilities used for washing the exterior of bulk chemical or waste tank trucks or for washing out the interior of any truck.
- Wastewater from commercial laundries or Laundromats, excluding waste from a dry-cleaning facility or waste from a commercial laundry used by an industry to wash chemical-contaminated clothing worn by workers.
- VLS-Special Waste, specifically, any waste generated at any Vopak subsidiary.

#### **4.1.2 Verification of Wastes Upon Receipt**

Upon receipt of the waste at VLS:

- A representative sample is collected;
- A fingerprint analysis is conducted;
- The results of the fingerprint analysis are compared with predetermined acceptable ranges; and
- Conforming wastes are accepted and managed as per the PWO.

Nonconforming wastes are either:

- Returned to the generator;
- Kept remaining in a transport vessel, within a designed transporter storage area, until the nonconformance discrepancies are resolved (a maximum of 48 hours);
- Stored in a permitted unit until the nonconformance discrepancies are resolved (a maximum of 7 days);
- At the request of the generator, transferred to an alternative TSD facility; or
- Upon approval of Operations, the pre-acceptance ranges may be varied and the waste accepted, provided that all regulatory requirements are met and the waste is compatible with the materials of construction.

Plant procedures address instances for which an immediate sample for verification analysis is not possible, due to safety concerns.

#### **4.1.3 Process Monitoring**

As waste is managed onsite, routine process monitoring is conducted according to the Standard Operating Procedures (SOP) to ensure that the waste maintains acceptable tolerances while managed in onsite waste management units and that it meets the final disposal requirements, as applicable. VLS Operations is responsible for the implementation of required process monitoring and review of the results.

## **4.2 Characterization of Generated Wastes**

This section specifies the characterization of waste streams generated by the facility.

### **4.2.1 Characterizing Generated Waste from Vessel Cleaning**

The cleaning process begins with containers that may be empty or may contain a:

- RCRA Manifested Waste;
- Waste Heel; or
- Product Heel.

#### **4.2.1.1 Containers Containing RCRA Manifested Waste**

A container containing a RCRA manifested waste is received by the signing of the manifest. The container is pumped, aspirated and/or drained of all waste possible. The waste is then managed for appropriate treatment and disposal. When the pumping, aspirating and/or draining can no longer remove any more waste, the container is examined to determine if it is RCRA Empty as defined by 40 CFR §261.7(b). The waste heel (if any) that remains in the container is handled as described below.

#### **4.2.1.2 Containers Containing Waste Heel**

When the waste heel is removed from a RCRA empty container, the waste determination of that heel is based on process knowledge in compliance with 30 TAC §335.511. The process knowledge is based on the GWP in which the Generator defines the waste stream and the applicable EPA Hazardous Waste Codes. If the generator has specified the waste as a Class 1 non-hazardous waste, then the heel is considered a Class 1 non-hazardous waste. Otherwise, the waste heel is disposed of as a hazardous waste with the applicable waste codes.

The next process for the container is cleaning. Wastewater may be generated in this process and is characterized using process knowledge in compliance with 30 TAC § 335.511. The process knowledge is based on the GWP in which the Generator defines the waste stream and the applicable EPA Hazardous Waste Codes. If the GWP or the Manifest states a Class 1 non-hazardous waste, then the wastewater is appropriately classified as a Class 1 non-hazardous Waste. If the Generator has specified any characteristically hazardous waste or hazardous waste listed under 40 CFR §261.31, 40 CFR §261.32 and/or 40 CFR §261.33(e) on the GWP or the Manifest, then the wastewater is classified as a hazardous waste with the applicable waste codes and is disposed of accordingly.

#### **4.2.1.3 Containers Containing Product Heel**

As a waste reduction measure, the Customer is given the opportunity to have a product heel returned. Upon notification that the product heel is to be returned to the Customer, the heel is placed into a compatible container to ship back to the customer. The container is then labeled as a product with appropriate DOT markings and is stored until it can be returned to the customer with a bill of lading.

When the Customer notifies VLS that they do not wish to have the product heel returned, the heel is then classified as a waste upon removal from the container. In compliance with 30 TAC §335.511, the classification of this waste is based on process knowledge. The process knowledge is based on the Safety Data Sheet (SDS) that is associated with the product heel of the container that is being cleaned. If the SDS specifies a characteristic or a listed EPA hazardous waste code, then the waste is a hazardous waste pursuant to 30 TAC §335.504 and 40 CFR Part 261 Subpart C. All other wastes are classified as Class 1 Non-hazardous pursuant to 30 TAC §335.505(7).

At times, a special treatment is necessary to reduce or to remove the hazards associated with the product heel. Wastes generated by special treatment processes will be classified by process knowledge by referring to the SDS and/or analytical data as required in 40 CFR 261 Subpart A and 30 TAC §335.509.

Wastewater may be generated from this process and is classified using process knowledge. The process knowledge is based on the SDS that is associated with the container that is being cleaned. If the SDS specifies a characteristic or a listed EPA hazardous waste code, then the wastewater is a hazardous waste pursuant to 30 TAC §335.504 and 40 CFR Part 261 Subpart C. All other wastes are classified as Class 1 Non-hazardous in compliance with 30 TAC §335.505(7).

After the container is properly cleaned, a Customer may request that the container be blasted with an abrasive material. Process knowledge, including knowledge of the material of construction for the container, will be used to determine the hazardous/non-hazardous classification of the waste abrasive material.

#### **4.2.2 Characterizing the Waste Generated from Hazardous Waste Management Facility**

The Hazardous Waste Management Facility can be divided into:

- Wastewater Treatment System;
- Fuels Blending Process;
- Bulking Process;
- Disposal Well Injection System;
- Special Treatments;
- Plant Trash; and
- Storage/Management.

##### **4.2.2.1 Characterizing the Waste Generated from the Wastewater Treatment System**

Sources of wastewater for the Wastewater Treatment System can include but are not limited to wastewater and stormwater from onsite operational areas, vessels, and off-site sources.

VLS segregates the characteristically hazardous wastewater as defined by 40 CFR Part 261 Subpart C from hazardous wastewater containing EPA Hazardous Waste Codes listed under 40 CFR §261.31, 40 CFR §261.32, and/or 40 CFR §261.33 prior to the treatment process. During the treatment process, bio-solids are produced and are classified by process knowledge in accordance with 30 TAC §335.511, which is

supplemented with historical analytical results for waste analysis as required under 40 CFR §261 Subpart A and 30 TAC §335.509. Based on process knowledge and historical analytical data, the bio-solids produced from the treatment of characteristically hazardous wastewater are disposed of as Class 1 non-hazardous waste. The bio-solids produced from the treatment of wastewater that contains EPA Waste Codes from 40 CFR §261.31, 40 CFR §261.32 and/or 40 CFR §261.33 are disposed of as a hazardous waste.

During the wastewater treatment process, solids are produced and are classified by process knowledge in accordance with 30 TAC §335.511, which is supplemented with historical analytical results for waste analysis as required under 40 CFR §261 Subpart A and 30 TAC §335.509. Based on process knowledge and historical analytical data, the process solids that are produced from the wastewater are disposed of as Class 1 non-hazardous waste. The process solids that are produced from wastewater that are characteristically hazardous or that contain hazardous waste codes from 40 CFR §261.31, 40 CFR §261.32 and/or 40 CFR §261.33 are disposed of as a hazardous waste.

Other solid waste can be produced during routine equipment cleaning. The solids from equipment cleaning are classified by process knowledge in accordance with 30 TAC §335.511, which is supplemented with historical analytical results for waste analysis as required under 40 CFR §261 Subpart A and 30 TAC §335.509. Based on process knowledge and historical analytical data, the bio-solids produced from the treatment of characteristically hazardous wastewater are disposed of as Class 1 non-hazardous waste. The process solids produced from the treatment of wastewater that contain EPA Waste Codes from 40 CFR §261.31, 40 CFR §261.32 and/or 40 CFR §261.33 are disposed of as a hazardous waste.

The wastewater effluent is discharged from the TPDES permitted outfall.

#### ***4.2.2.2 Characterizing the Waste Generated from Fuel Blending Process***

The Fuel Blending Process produces a blending fuel stream, which is classified by process knowledge in accordance with 30 TAC §335.511. The process knowledge is based on the GWP and the manifest. The facility may segregate the characteristically hazardous blended fuels from the listed hazardous blended fuels containing EPA Hazardous Waste Codes listed under 40 CFR §261.31, 40 CFR § 261.32 and/or 40 CFR §261.33 prior to the fuels blending process. When characteristic and listed fuels are not segregated, the resultant blend is managed as a listed hazardous waste. Based on process knowledge, the blended fuels stream is disposed of as a hazardous waste containing the appropriate hazardous waste codes.

#### ***4.2.2.3 Characterizing the Waste Generated from Bulking Process***

The facility generates solid and liquid waste streams in the Bulking Process. The Bulking Process mixes wastes that are compatible and similar in chemical and hazardous properties. The waste arriving in containers may be transferred to larger containers prior to shipment for offsite disposal. If needed, waste may also be solidified. The classification of the waste stream is based on process knowledge in accordance with 30 TAC §335.511. The process knowledge is based on the GWP and the manifest.

#### ***4.2.2.4 Characterizing the Waste Generated from Disposal Well Injection System***

The injection stream can be wastewater from generated or received process wastewater.

In compliance with the UIC Permit, VLS does not inject:

- Waste prohibited from injection under 40 CFR Part 148 Subpart B;
- Radioactive Waste;
- Naturally occurring radioactive material (NORM);
- Oil and gas NORM waste;
- Ignitable waste;
- Reactive waste;
- Incompatible waste; and
- PCB waste.

Before wastewater is sent through the Disposal Well Injection System (DWIS) for processing, VLS segregates the characteristically hazardous wastewater injection stream from hazardous wastewater containing EPA Hazardous Waste Codes listed under 40 CFR §261.31, 40 CFR §261.32 and/or 40 CFR §261.33. The injection stream is pretreated to remove organics, to reduce corrosivity and/or to remove reactive components.

The next treatment process is to remove the solids. These process solids are classified by process knowledge in accordance with 30 TAC §335.511, which is supplemented with historical analytical results for waste analysis as required under 40 CFR §261 Subpart A and 30 TAC §335.509. Based on process knowledge and historical analytical data, the process solids that are produced from Class 1 non-hazardous wastewater or characteristically hazardous wastewater are disposed of as Class 1 non-hazardous waste (after treatment). The process solids that are produced from wastewater that contain hazardous waste codes listed under 40 CFR §261.31, 40 CFR §261.32 and/or 40 CFR §261.33 are disposed of as a hazardous waste.

After the wastewater has been treated through DWIS, the injection stream is then classified by process knowledge in accordance with 30 TAC §335.511. Based on process knowledge, the injection stream that is characteristically hazardous or is considered a listed hazardous waste by definition of 40 CFR §261.31, 40 CFR §261.32 and/or 40 CFR §261.33 is disposed of as a hazardous waste. All other wastewater is classified as Class 1 non-hazardous in compliance with 30 TAC §335.505(7).

Before actual injection begins, all requirements of 40 CFR Parts 146, 148, 261, 262, 265 and 268 are met. As required by the UIC Permit, the injection stream is monitored with the use of continuous data recorders that record the following parameters:

- pH.
- Specific Gravity.
- Injection Flow.
- Injection Pressure.
- Injection Temperature.
- Annulus Pressure.

The above parameters are recorded hourly onto the Daily Injection Data sheet.

#### **4.2.2.5 Characterizing Special Waste Treatment Processes**

Waste generated by special waste treatment processes will be characterized using process knowledge based on GWP or SDS and/or analytical data as required under 40 CFR §261 Subpart A and 30 TAC §335.509.

#### **4.2.2.6 Characterizing Plant Trash**

General Plant Trash will be classified using process knowledge based on GWP or SDS and/or analytical data as required under 40 CFR §261 Subpart A and 30 TAC § 335.509, and is typically non-hazardous.

#### **4.2.2.7 Characterizing Waste Generated by Storage/Management**

Some containerized waste streams that are accepted by manifest, and stored onsite without treatment, are subsequently sent offsite for disposal. The waste will be characterized using process knowledge based on the manifest and GWP that accompanied the waste at receipt.

### **4.3 Sampling**

On-site sampling is performed:

- Upon generation of a new waste;
- As necessary when the generating process changes;
- Upon receipt of a received waste;
- As necessary, according to the PWO, during processing; and
- Prior to final disposal by disposal well injection or wastewater discharge.

#### **4.3.1 Representative Samples**

In addition to standard analytical testing and approved sampling procedures, VLS has instituted specific methodologies for ensuring the samples taken from various types of containers or tanks are representative. The sampling devices are selected based upon the nature of the waste, as well as the size and type of the process involved.

##### **4.3.1.1 Representative Sample from Received Waste**

Prior to receipt of a waste stream at the facility for treatment, storage and/or disposal, the waste stream is characterized by the generator in the GWP and by VLS. The GWP provides VLS with information concerning the distribution and nature of waste components within the waste material. Because VLS has obtained this information, a less comprehensive sampling approach is appropriate.

##### **4.3.1.1.1 Containers, Tank Trucks and Railcars**

Sampling of small containers (e.g. drums, cartons and other small units) varies with the nature of the waste. For flowable materials, the sampling device of choice is either Coliwasa Sampler or an open tube sampler to draw a full vertical section. For non-flowable wastes, tubing or a trier is used to obtain a representative sample.



Large containers for flowable materials and bulk containers for solid materials may be either stationary or mobile. Liquids are sampled with Coliwasa Sampler or an open tube sampler to obtain a vertical section, or by weighted bottle or bomb sampler to allow for sampling at various depths. Solids are sampled by trier or shovel or by coring with heavy tubing. Container sediments are sampled from the bottom valve when not readily sampled from the top.

Samples are collected on a 10 percent random basis for small containers. Bulk containers are sampled for each individual load before processing begins.

#### **4.3.1.1.2 Representative Samples from In-Line Sampling of Processes**

The variability of the waste stream at any point in a treatment process is first determined from knowledge of the process that produces the waste, or from the results of a preliminary investigation of the waste variability. The sampling procedures consist of obtaining grab samples from appropriate in-line sampling ports in the process stream. The grab samples are then composited as necessary for analysis.

#### **4.3.1.2 Representative Samples from Generated Waste**

Sampling of small containers (e.g., drums, cartons and other small units) varies with the nature of the waste. For flowable materials, the sampling device of choice is either a Coliwasa Sampler or an open tube sampler to draw a full vertical section.

For a stratified tank, a grab sample from tank side taps or bomb sampling corresponding to each layer may be appropriate. For non-flowable wastes, tubing or a trier is used to obtain a representative sample. Tank sediments are sampled from the bottom valve when not readily sampled from the top.

#### **4.3.2 Sample Preservation, Preparation and Testing**

The sampling and analytical methods used by VLS is selected from approved methods from the following resources, unless a Vopak Analytical Method (VAM), or written procedure developed by Vopak because an approved test method is not available, is used. Sample preparation and preservation procedures are determined on a test-specified basis. NOTE: These test methods are current at the time of document revision and represent the historical method used. Methods may be updated with an approved EPA, ASTM or Standard Method without affecting the Waste Analysis Plan.

EPA's online test method site can be found at:

<http://www.epa.gov/epawaste/hazard/testmethods/index.htm>.

Test Methods for Evaluating Solid Waste (SW-846), current version available online at:

<http://www.epa.gov/epawaste/hazard/testmethods/sw846/index.htm>.

Standard Methods for the Examination of Water and Wastewater, current version available at:

<http://www.standardmethods.org/>.

Annual Book of ASTM Standards, Section 11 - Water And Environmental Technology, current version available at: <http://www.astm.org/BOOKSTORE/BOS/section11.htm>.

Methods for Chemical Analysis of Water and Wastes (EPA 600/4-79-020), 1983 version available at:  
<http://yosemite.epa.gov/water/owrcatalog.nsf/>.

#### **4.3.3 Sample Shipment**

Samples are packaged in appropriate containers, and are properly secured and labeled. Samples shipped offsite are transported in accordance with the applicable federal, state and local regulations, as appropriate.

### **4.4 Analytical Parameters**

#### **4.4.1 Rationale for Analysis**

VLS structures the analyses to adequately characterize the waste and to define operational parameters for various treatment processes. The analyses include basic screening procedures that are used to indicate the type of treatment, storage and/or disposal that is most suitable for that particular waste. Additional analyses are selected by VLS's Laboratory or VLS's Operations to improve operational control. The results of these analyses provide VLS's Laboratory and VLS's Operations with another level of confidence concerning the proper means of treatment, storage and/or disposal. The basis for requiring these additional analyses is:

- VLS experience and judgment;
- GWP or other description of the chemical and physical properties of the wastes;
- GWP or other description of the processes generating waste;
- Results of the Profiling and/or Supplemental Analyses; and/or
- Potential waste treatment process.

#### **4.4.2 Test Methods**

Table IV.C.2 includes each parameter that may be specified for both generated and received wastes, along with the specific rationale for use of that parameter and the appropriate test method. The accuracy of the analytical testing methodologies is specified within the text of each method.

### **4.5 Subpart BB – Equipment**

For most waste, in lieu of making a determination of organic content, process knowledge is used to determine applicability of this Subpart. When process knowledge is insufficient, an initial determination of organic content for hazardous waste is made using direct measurement. For some waste streams, in lieu of making a determination of volatile organic content for each waste stream, the content is assumed to be greater than Subpart BB thresholds at all times, and all units managing the waste are subject to the Subpart BB standards.

When a direct measurement is made, samples representative of the highest expected total organic content are used. Pursuant to facility procedures, total organic content information provided by the generator of the received waste streams may be used, provided that the information is certified to represent the highest expected total organic content. For direct measurement of organic content, a minimum of four grab samples of the hazardous waste are collected, labeled, documented and tested as needed and in accordance with the specific test parameter and EPA-required methodology.

When process knowledge is used to determine total organic concentration, documentation of the determination is maintained as part of the facility files and may include information such as:

- Production process information documenting that no organic compounds are used;
- Information that the waste is substantially identical to another waste for which direct measurement has been made; or
- Prior speciation analysis results on the same waste stream where it can also be documented that no process changes have occurred since the analysis that could affect the organic concentration.

#### **4.6 Subpart CC – Tanks and Containers**

For some wastes, in lieu of making a determination of volatile organic content for each waste stream, the content is assumed to remain greater than Subpart CC thresholds at all times, and all units managing the waste are subject to the Subpart CC standards. For generated waste streams and some received waste streams that are suspected to contain less than threshold concentrations (500 ppmw), the average volatile organic concentration of the waste is determined using either direct measurement or process knowledge.

The waste is sampled at the point of origin, as defined in facility procedures. The samples are collected, and analyzed for volatile organic content in accordance with the requirements specified to the specific test parameter and EPA-required methodology. An averaging period of one year is used to determine the average volatile organic concentration. At least four representative samples collected within a one-hour period are analyzed, and the average volatile organic concentration calculated pursuant to the methodology required by 40 CFR §265.1084 (a)(5). An initial waste determination is repeated annually, unless process knowledge is used to determine subsequent applicability.

For waste streams generated offsite, either certified generator date will be used, or the point of waste treatment (corresponding to the first time the waste enters a treatment unit subject to Subpart CC) will be defined and methods described for generated waste applied to determine the volatile organic concentration.

When required, direct measurement is used to determine maximum organic vapor pressure. The samples are collected and handled in accordance with approved methods. Analysis is performed by one of the methods listed in 40 CFR §265.1084(c)(3)(ii). For waste on which direct measurement is not used, process knowledge may be used and based on the following considerations:

- Organic material balances;
- Production process information documenting that no organic compounds are used;
- Information that the waste is substantially identical to another waste for which direct measurement has been made;
- Prior speciation analysis results on the same waste stream where it can also be documented that no process changes have occurred since the analysis that could affect the organic concentration;
- Review of manifests, shipping papers or waste certification notices; or

- The hazardous waste is generated by a process for which at other locations it previously has been determined by direct measurement that the waste maximum organic vapor pressure is less than the maximum vapor pressure limit of the appropriate tank design capacity category.

#### **4.7 Land Disposal Restrictions – Generated Waste**

When a new waste is generated, results of the analyses or process knowledge are used to screen the waste to determine if it is characteristically hazardous and subject to current land disposal restrictions or prohibitions pursuant to 40 CFR Part 268. If the following conditions apply:

- The waste is hazardous for the characteristic of ignitability, is not the high TOC ignitable liquid subcategory or is not treated by CMBST or RORGS of 40 CFR 268.42, Table 1;
- The waste is hazardous for the characteristic of reactivity;
- The waste is hazardous for the characteristic of organic toxicity (D012 – D043); or
- The waste is prohibited by 40 CFR §268.37, §268.38 and §268.39 (waste-specific prohibitions)

then the underlying hazardous constituents as listed in 40 CFR §268.48 are determined.

For lab packs that do not contain wastes or hazardous constituents that are specified in 40CFR Part 268, Appendix IV, an underlying constituent determination is not required. Documentation of the contents and any excluded or exempt wastes will be maintained.

##### **4.7.1 Notification Procedures for Restricted Wastes**

Waste shipments subject to restriction under 40 CFR Part 268 will be reviewed to ensure that appropriate notifications and certifications required by 40 CFR §268.7 are submitted with the shipment, including notification of the appropriate treatment standards and any applicable prohibition levels. This notification will include:

- EPA hazardous waste codes;
- If treatment is required, the waste constituents that the treater will monitor, if monitoring will not include all regulated constituents, for wastes F001 through F005, F039, D001, D002, D003, and D012 through D043;
- Whether the waste is a non-wastewater or a wastewater pursuant to 40 CFR §268.2(d) and (f);
- Manifest number;
- For hazardous debris, the contaminants subject to treatment, as required, as provided under 40 CFR §268.45(b) and the statement “This hazardous debris is subject to alternative treatment standards of 268.45;” and
- Waste analysis data, where available.

When a Generator managing a restricted waste determines that the waste can be land disposed without further treatment, VLS will also submit (in addition to the items listed above) a certification stating that the

waste meets the applicable treatment standards. This certification will be signed by an authorized representative and will state:

"I certify under penalty of law that I personally have examined and am familiar with the waste through analyses and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA Section 3004(d). I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting false certification, including the possibility of a fine and imprisonment."

#### **4.7.2 Notification Requirements for Exempt Waste**

If a waste is determined to be subject to exemption from a prohibition on the type of land disposal method, a notice will be sent with each shipment of waste including the following information:

- EPA hazardous waste codes;
- If treatment is required, the waste constituents that the treater will monitor, if monitoring will not include all regulated constituents, for wastes F001 through F005, F039, D001, D002, D003, and D012 through D043;
- Whether the waste is a non-wastewater or a wastewater pursuant to 40 CFR §268.2(d) and (f);
- Manifest number;
- For hazardous debris, the contaminants subject to treatment, as required, as provided under 40 CFR §268.45(b) and the statement "This hazardous debris is subject to alternative treatment standards or 268.45," unless the treatment standards for 268.40 are used, and then reference to 268.40 will be specified;
- The date the waste is subject to the prohibitions; and
- Waste analysis data, where available.

#### **4.7.3 Recordkeeping**

All documentation, including notices, certifications, demonstrations and waste analysis data produced to comply with land Disposal Restriction regulations will be retained for at least three years, or the length of time as stated in federal and state regulations, from the time the waste was last sent for on- or off-site treatment, storage or disposal. This time period will automatically be extended during the course of an unresolved regulatory issue.

### **4.8 Land Disposal Restrictions – Received Waste**

VLS will require LDR notification with any new waste approved for receipt and, at the discretion of VLS, with each incoming load.

## 4.9 Frequency of Recharacterization

Annually, Generators are required to submit an updated waste profile or certification that the process generating the waste has not changed. Characterization of wastes is repeated:

- For generated waste when the waste changes due to changes in the generating process;
- For received waste when:
- Verification analysis upon receipt indicates a change in the character of the wastes, or
- The fingerprint analysis does not match specified ranges.

## 4.10 Land Disposal Restrictions – Shipped Waste

Waste shipments subject to restrictions under 40 CFR Part 268 or RCRA Section 3004(d) will be reviewed to ensure that appropriate notifications and certifications required by 40 CFR §268.7 have been submitted with the shipment. As directed in 40 CFR §268.7, the Generator of restricted wastes is required to notify a storage facility of the appropriate treatment standards set forth in Subtitle D and any applicable prohibition levels set forth in 40 CFR 268.7 or RCRA 3004(d). This notification must include:

- EPA Hazardous Waste Code;
- Corresponding Treatment Standards:
- Specific for F001-F005, F039 and waste prohibited pursuant to §268.32 or RCRA Section 3004(d);
- Other restricted wastes should include the subcategory of the waste, treatability group(s) of the waste and the CFR section(s) and paragraphs where treatment standards appear;
- Manifest Number; and
- Waste Analysis Data, where applicable.

Where a Generator managing a restricted waste determines that the waste can be land disposed without further treatment, the Generator must also submit (in addition to the criteria listed above) a certification stating that the waste meets the applicable treatment standards. This certification must be signed by an authorized representative and must state:

"I certify under penalty of law that I personally have examined and am familiar with the waste through analyses and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standard specified in 40 CFR Part 268 Subpart D and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA 3004(d). I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting false certification, including the possibility of a fine and imprisonment."

## **5.0 Quality Assurance/Quality Control**

Quality assurance/quality control (QA/QC) procedures are applicable to both sampling procedures and analytical techniques and implemented at all times. Data collected for submittal to TCEQ will be in a manner consistent with the most current version of the Quality Assurance Project Plan for the Texas Commission on Environmental Quality for Environmental Monitoring and Measurement Activities Relating to RRCRA and UIC.

### **5.1 Collection and Handling of Samples**

Upon collection, samples destined for offsite laboratories are handled as follows:

- Each sample is uniquely identified;
- A chain-of-custody form is prepared to transfer the samples to the laboratory and request specific sample analysis;
- Samples are preserved as required;
- Samples are properly packaged; and
- Samples are sealed and properly transported.

Samples collected for onsite analysis are tagged and uniquely identified according to the shipment work order.

#### **5.1.1 Sample Labels**

Each sample collected for in-house testing or for off-site contract laboratory testing is labeled immediately after collection. To prevent misidentification of samples, legible labels are placed on each sample bottle. Labels are sufficiently durable to remain legible even when wet, and indelible ink is used. The label includes the following types of information:

- Requested analysis;
- Date of collection;
- Source of sample; and
- Unique sample identification for off-site analysis.

#### **5.1.2 Chain-of-Custody**

Each sample sent off-site to a contract laboratory is recorded on a chain-of-custody record to trace sample possession from the time of collection through receipt at the laboratory.

Chain-of-custody forms will become the permanent records of all sample handling and shipment. The chain-of-custody records will include the following information:

- Unique sample identification;
- Signature of collector;

- Date and time of collection;
- Number of containers;
- Parameters requested for analysis; and
- Signature(s) of person(s) involved in the chain-of-possession.

The form may vary, but it will include all of the above-listed information at a minimum. The chain-of-custody form will also function as a sample analysis request sheet for the receiving laboratory.

## **5.2 Analytical Program**

VLS uses standard EPA-approved analytical procedures where possible. Additionally, some unique procedures and protocols formulated by VLS have been developed in the absence of standard procedures. A complete listing of these methods is found in Table IV.C.2.

All test equipment maintained at the site is calibrated to within acceptable limits according to EPA or manufacturer specifications. Laboratory instruments are periodically inspected, maintained and serviced according to manufacturer specifications and guidelines. Reference standards and QC samples (e.g., blanks, standards, duplicates, spikes) are used to determine the accuracy and precision of procedures, instruments and operators. All such QA/QC data is recorded and maintained as a part of Quality Assurance. Records of all pertinent laboratory calibrations, analytical and quality control activities and data are maintained at the site.

### **5.2.1 Instrument and Analysis Quality Control**

All blanks, standards, duplicates and spikes are run in accordance with the requirements of 30 TAC §319.1 through §319.12, Table 3. The laboratory analytical results and records of quality assurance activities are kept on file for a period of at least three years, or five years as applicable regulations require. Records are maintained with the customer file as part of the facility files and will include:

- GWP and technical data concerning the waste stream;
- Generator supplied laboratory analysis;
- Data received through analysis by qualified outside laboratories; and
- Data received during the characterization analysis by facility personnel.

If qualified outside laboratories are used, records will be maintained in an identifiable manner (uniquely numbered samples). Qualified outside laboratories used by VLS will log in all samples and keep records of analyses performed on each sample as well as the results of each analysis. The outside laboratories used will perform all the quality assurance measures outlined above, keeping records of such and sending VLS a complete analytical report, which includes quality assurance results. The VLS Laboratory maintains a copy of the QA/QC plan of each contract laboratory used.

Certain facility personnel are trained in proper sampling techniques to collect samples. The facility generally conducts routine waste analysis using an onsite laboratory, or samples are sent offsite to a laboratory for analysis. In order to maintain the highest quality of analytical results, a review of sampling and analytical



procedures, including QA/QC, is conducted. Sampling and analysis responsibilities are delegated to a small group of individuals to minimize variations resulting from human error.

#### **5.2.2 *Instrument and Analysis Quality Control for the UIC System***

The pH of the injection stream is maintained at levels dictated by UIC Permit. A pH probe continuously monitors the pH. The pH probe is calibrated as needed (at least quarterly) by a third-party company to ensure quality control.

The Specific Gravity of the injection stream is maintained at levels dictated by the UIC Permit. The Specific Gravity is continuously monitored in-stream. The Specific Gravity meter is calibrated as needed (at least quarterly) by a third-party company to ensure quality control.

The Mechanical Integrity of the disposal well is ensured by a quarterly Corrosion Monitoring Test, an annual Annulus Pressure Test, an annual Radioactive Tracer Survey, an annual Pressure Fall-Off Test and an annual Bottom-Hole Pressure Survey.

**TABLE IV. A**  
**WASTE MANAGEMENT INFORMATION**

**Table IV.A. - Waste Management Information**

Waste Type(s)	Source	Volume (tons/year)
Spent Solids	Generated	5,000
Spent Fuels	Generated	5,000
Cartridge Filters - Spent	Generated	5,000
Hydrocarbon Contaminated Solids	Generated	5,000
Acidic Aqueous Waste	Generated	5,000
Spent Carbon	Generated	5,000
Aqueous Waste- Low Solvents	Generated	5,000
Aqueous Waste - High Dissolved Solids and Trace Metals	Generated	5,000
Contaminated Sandblast Grit	Generated	5,000
Mercury Contaminated Waste	Generated	5,000
Caustic Aqueous Waste	Generated	5,000
Organic Sludge	Generated	5,000
Inorganic Sludge	Generated	5,000
Liquid Organic Wastes	Generated	5,000
Inorganic Salt	Generated	5,000
Lab Packs	Generated	5,000
Washwaters with Low Organics	Generated	5,000
Contaminated Stormwater	Generated	5,000
Caustic Solution with Metals and Cyanide	Generated	5,000
Computer Equipment	Generated	5,000
Wastewater Processing Solids; Biological Treatment Sludge	Generated	5,000

**Table IV.A. - Waste Management Information**

Waste Type(s)	Source	Volume (tons/year)
Crushed Drums	Generated	5,000
Hydrocarbon Contaminated Solids	Generated	5,000
Cartridge Filters- Spent; Deep well solids	Generated	5,000
Non-Hazardous Plant Refuse	Generated	5,000
Contaminated Stormwater Runoff	Generated	5,000
Non-hazardous Spent Carbon Canister	Generated	5,000
RFO Decant Waters	Generated	5,000
Waste Oil Received From Off-Site Sources	Generated	5,000
Aqueous Waste Contaminated with Inorganics	Generated	5,000
Waste Organic Liquids	Generated	5,000
Spent or Offspec Halogenated Pesticide Solid	Generated	5,000
Solid Inorganic Waste	Generated	5,000
Drilling Sludge	Generated	5,000
Organic Gas Cylinders- Hazardous	Generated	5,000
Waste Corrosive Solids	Generated	5,000
De-Watered Bio-Solids From the Wastewater Treatment System	Generated	5,000
Aerosol Cans	Generated	5,000
Non-Hazardous Soil and Debris	Generated	5,000
Waste Generated From Demolition of Buildings and Structures	Generated	5,000
Paint Waste From Discarded Paint and Paint-Related Materials	Generated	5,000
Inorganic Liquids Generated From Hazardous Wastes	Generated	5,000

**Table IV.A. - Waste Management Information**

Waste Type(s)	Source	Volume (tons/year)
Off-Spec Product - Loading/Unloading or Tank/Line Cleanings	Generated	5,000
Soil Contaminated with Inorganic Product Resulting From Spill Clean Up	Generated	5,000
Hazardous Solid Inorganic Waste Spent Filter Media	Generated	5,000
Plant Trash	Generated / Received	5,000
Pesticide Waste	Received from Off-Site	0 - 1,500,000
Metallic Waste	Received from Off-Site	0 - 1,500,000
Caustic Waste	Received from Off-Site	0 - 1,500,000
Acidic Waste, including Spent Acids	Received from Off-Site	0 - 1,500,000
Neutralized Spent Acids	Received from Off-Site	0 - 1,500,000
Organic Waste	Received from Off-Site	0 - 1,500,000
Inorganic Waste	Received from Off-Site	0 - 1,500,000
Waste Oils And Solvents	Received from Off-Site	0 - 1,500,000
Aqueous Waste	Received from Off-Site	0 - 1,500,000
Washwater	Received from Off-Site	0 - 1,500,000
Contaminated Stormwater	Received from Off-Site	0 - 1,500,000
Sludges	Received from Off-Site	0 - 1,500,000
Discarded Off-Spec Products	Received from Off-Site	0 - 1,500,000
Lab Packs	Received from Off-Site	0 - 1,500,000
Solids Contaminated with Hydrocarbons	Received from Off-Site	0 - 1,500,000
Contaminated Filters	Received from Off-Site	0 - 1,500,000

**TABLE IV.B**  
**WASTES MANAGED IN PERMITTED UNITS**

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

No.	Waste	EPA Hazardous Waste Numbers	TCEQ Waste Form Codes and Classification Codes
1	Spent Solids	D, F, K, P & U waste codes <sup>1</sup>	310H
2	Spent Fuels	D, F, K, P & U waste codes <sup>1</sup>	206H
3	Cartridge Filters - Spent	D, F, K, P & U waste codes <sup>1</sup>	310H
4	Hydrocarbon Contaminated Solids	D, F, K, P & U waste codes <sup>1</sup>	301H
5	Acidic Aqueous Waste	D, F, K, P & U waste codes <sup>1</sup>	105H
6	Spent Carbon	D, F, K, P & U waste codes <sup>1</sup>	404H
7	Aqueous Waste - Low Solvents	D, F, K, P & U waste codes <sup>1</sup>	101H
8	Aqueous Waste - High Dissolved Solids and Trace Metals	D, F, K, P & U waste codes <sup>1</sup>	113H
9	Contaminated Sandblast Grit	D, F, K, P & U waste codes <sup>1</sup>	490H
10	Mercury Contaminated Waste	D, F, K, P & U waste codes <sup>1</sup>	319H
11	Caustic Aqueous Waste	D, F, K, P & U waste codes <sup>1</sup>	110H
12	Organic Sludge	D, F, K, P & U waste codes <sup>1</sup>	609H
13	Inorganic Sludge	D, F, K, P & U waste codes <sup>1</sup>	519H
14	Liquid Organic Wastes	D, F, K, P & U waste codes <sup>1</sup>	219H
15	Inorganic Salt	D, F, K, P & U waste codes <sup>1</sup>	319H
16	Lab Packs	D, F, K, P & U waste codes <sup>1</sup>	003H
17	Washwaters with Low Organics	D, F, K, P & U waste codes <sup>1</sup>	102H
18	Contaminated Stormwater	D, F, K, P & U waste codes <sup>1</sup>	102H
19	Caustic Solution with Metals and Cyanide	D, F, K, P & U waste codes <sup>1</sup>	107H

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

No.	Waste	EPA Hazardous Waste Numbers	TCEQ Waste Form Codes and Classification Codes
20	Computer Equipment	None	319H
21	Waste-water Processing Solids; Biological treatment sludge	None	6071
22	Crushed Drums	None	3081
23	Hydrocarbon Contaminated Solids	None	3011
24	Cartridge Filters - Spent; Deepwell solids	None	3101
25	Non-Hazardous Plant Refuse (discarded PPE, pallets, pigs, etc.)	None	3191
26	Contaminated Stormwater Runoff	None	1021
27	Non-Hazardous Spent Carbon Canister	None	4041
28	RFO Decant Waters	None	1021
29	Waste Oil Received From Off-Site Sources	None	2061
30	Aqueous Waste Contaminated With Inorganics	None	1011
31	Waste Organic Liquids	None	2191
32	Spent or Off spec Halogenated Pesticide Solid	None	4011
33	Solid Inorganic Waste	None	3191
34	Drilling Sludge	None	5141
35	Organic Gas Cylinders - Hazardous	D, F, K, P & U waste codes <sup>1</sup>	801H
36	Waste Corrosive Solids	D, F, K, P & U waste codes <sup>1</sup>	316H
37	De-Watered Bio-Solids From the Wastewater Treatment System	None	3912
38	Aerosol Cans	D, F, K, P & U waste codes <sup>1</sup>	308H



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

No.	Waste	EPA Hazardous Waste Numbers	TCEQ Waste Form Codes and Classification Codes
39	Non-Hazardous Soil and Debris	None	3022
40	Waste Generated From Demolition of Buildings and Structures	None	3111
41	Paint Waste From Discarded Paint and Paint-Related Materials	D, F, K, P & U waste codes <sup>1</sup>	209H
42	Inorganic Liquids Generated From Handling of Hazardous Wastes	D, F, K, P & U waste codes <sup>1</sup>	103H
43	Off-Spec Product - Loading / Unloading or Tank/Line Cleanings	None	2051
44	Soil Contaminated with Inorganic Product Resulting From Spill Clean up	D, F, K, P & U waste codes <sup>1</sup>	302H
45	Hazardous Solid Inorganic Waste Spent Filter Media	D, F, K, P & U waste codes <sup>1</sup>	319H
46	Plant Trash	None	902, 999, 1, 2
47	Pesticide Waste	D, F, K, P & U waste codes <sup>1</sup>	401, 402 H,1,2
48	Metallic Waste	D, F, K, P & U waste codes <sup>1</sup>	103, 106, 107, 117, 303, 304, 307, 308, 309, 312, 316, 502, 510, 519, 604, 606, 609 H,1,2
49	Caustic Waste	D, F, K, P & U waste codes <sup>1</sup>	106, 107, 108, 109, 110 H,1,2
50	Acidic Waste, including Spent Acids	D, F, K, P & U waste codes <sup>1</sup>	103, 104, 105 H,1,2
51	Neutralized Spent Acids	D, F, K, P & U waste codes <sup>1</sup>	103, 104, 105 H,1,2
52	Organic Waste	D, F, K, P & U waste codes <sup>1</sup>	201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 219, 296, 297, 298, 299, 401, 402, 403, 404, 405, 406, 407, 409, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 801 H,1,2

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

No.	Waste	EPA Hazardous Waste Numbers	TCEQ Waste Form Codes and Classification Codes
53	Inorganic Waste	D, F, K, P & U waste codes <sup>1</sup>	101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 119, 198, 199, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 319, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 701 H,1,2
54	Waste Oils and Solvents	D, F, K, P & U waste codes <sup>1</sup>	203, 205, 206, 207, 209, 210, 211, 212, 219 H,1,2
55	Aqueous Waste	D, F, K, P & U waste codes <sup>1</sup>	101, 102, 105, 111, 112, 113, 114, 115, 116, 207 H,1,2
56	Washwater	D, F, K, P & U waste codes <sup>1</sup>	101, 102, 105, 111, 112, 113, 114, 115, 116, 117, 207 H,1,2
57	Contaminated Stormwater	D, F, K, P & U waste codes <sup>1</sup>	101, 102, 105, 111, 112, 113, 114, 115, 116, 117, 207 H,1,2
58	Sludges	D, F, K, P & U waste codes <sup>1</sup>	391, 491, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 519, 597, 598, 599, 601, 602, 603, 604, 605, 606, 607, 608, 609, 695, 696, 697, 698, 699 H,1,2
59	Off-Spec Products Discarded as Wastes	D, F, K, P & U waste codes <sup>1</sup>	105, 110, 202, 203, 204, 208, 209, 210, 211, 212, 219, 296, 307, 309, 401, 402, 40 H,1,2
60	Lab Packs	D, F, K, P & U waste codes <sup>1</sup>	001, 002, 003, 004, 009 H,1,2
61	Solids Contaminated with Hydrocarbons	D, F, K, P & U waste codes <sup>1</sup>	301, 302, 303, 304, 305, 306, 310, 389, 390, 403, 404, 405, 406, 407, 409, 488, 489, 490, 491, 492, 601, 602, 603, 604, 605, 606, 607, 608, 609, 695, 696, 697, 698 H,1,2
62	Contaminated Filters	D, F, K, P & U waste codes <sup>1</sup>	310, 404 H,1,2

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

## 1. All Waste Codes Listed Below:

D Waste Codes: D001 D002 D003 D004 D005 D006 D007 D008 D009 D010 D011 D012 D013 D014 D015 D016 D017 D018 D019 D020 D021 D022 D023 D024 D025 D026 D027 D028 D029 D030 D031 D032 D033 D034 D035 D036 D037 D038 D039 D040 D041 D042 D043.

F Waste Codes: F001 F002 F003 F004 F005 F006 F007 F008 F009 F010 F011 F012 F019 F020 F021 F022 F023 F024 F025 F026 F027 F028 F032 F034 F035 F037 F038 F039.

K Waste Codes: K001 K002 K003 K004 K005 K006 K007 K008 K009 K010 K011 K013 K014 K015 K016 K017 K018 K019 K020 K021 K022 K023 K024 K025 K026 K027 K029 K030 K031 K032 K033 K034 K035 K036 K037 K038 K039 K040 K041 K042 K043 K044 K045 K046 K047 K048 K049 K050 K051 K052 K060 K061 K062 K069 K071 K073 K083 K084 K085 K086 K087 K088 K093 K094 K095 K096 K097 K098 K099 K100 K101 K102 K103 K104 K105 K106 K107 K108 K109 K110 K111 K112 K113 K114 K115 K116 K117 K118 K123 K124 K125 K126 K131 K132 K136 K141 K142 K143 K144 K145 K147 K148 K149 K150 K151 K156 K157 K158 K159 K161 K169 K170 K171 K172 K174 K175 K176 K177 K178 K181.

P Waste Codes: P001 P002 P003 P004 P005 P006 P007 P008 P009 P010 P011 P012 P013 P014 P015 P016 P017 P018 P020 P021 P022 P023 P024 P026 P027 P028 P029 P030 P031 P033 P034 P036 P037 P038 P039 P040 P041 P042 P043 P044 P045 P046 P047 P048 P049 P050 P051 P054 P056 P057 P058 P059 P060 P062 P063 P064 P065 P066 P067 P068 P069 P070 P071 P072 P073 P074 P075 P076 P077 P078 P081 P082 P084 P085 P087 P088 P089 P092 P093 P094 P095 P096 P097 P098 P099 P101 P102 P103 P104 P105 P106 P108 P109 P110 P111 P112 P113 P114 P115 P116 P118 P119 P120 P121 P122 P123 P127 P128 P185 P188 P189 P190 P191 P192 P194 P196 P197 P198 P199 P201 P202 P203 P204 P205.

U Waste Codes: U001 U002 U003 U004 U005 U006 U007 U008 U009 U010 U011 U012 U014 U015 U016 U017 U018 U019 U020 U021 U022 U023 U024 U025 U026 U027 U028 U029 U030 U031 U032 U033 U034 U035 U036 U037 U038 U039 U041 U042 U043 U044 U045 U046 U047 U048 U049 U050 U051 U052 U053 U055 U056 U057 U058 U059 U060 U061 U062 U063 U064 U066 U067 U068 U069 U070 U071 U072 U073 U074 U075 U076 U077 U078 U079 U080 U081 U082 U083 U084 U085 U086 U087 U088 U089 U090 U091 U092 U093 U094 U095 U096 U097 U098 U099 U101 U102 U103 U105 U106 U107 U108 U109 U110 U111 U112 U113 U114 U115 U116 U117 U118 U119 U120 U121 U122 U123 U124 U125 U126 U127 U128 U129 U130 U131 U132 U133 U134 U135 U136 U137 U138 U140 U141 U142 U143 U144 U145 U146 U147 U148 U149 U150 U151 U152 U153 U154 U155 U156 U157 U158 U159 U160 U161 U162 U163 U164 U165 U166 U167 U168 U169 U170 U171 U172 U173 U174 U176 U177 U178 U179 U180 U181 U182 U183 U184 U185 U186 U187 U188 U189 U190 U191 U192 U193 U194 U196 U197 U200 U201 U202 U203 U204 U205 U206 U207 U208 U209 U210 U211 U213 U214 U215 U216 U217 U218 U219 U220 U221 U222 U223 U225 U226 U227 U228 U234 U235 U236 U237 U238 U239 U240 U243 U244 U246 U247 U248 U249 U271 U278 U279 U280 U328 U353 U359 U364 U367 U372 U373 U387 U389 U394 U395 U404 U409 U410 U411.

**TABLE IV.C**  
**SAMPLING AND ANALYTICAL METHODS**

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

Waste No. <sup>1</sup>	Sampling Location	Sampling Method <sup>2</sup>	Frequency	Parameter	Test Method <sup>2</sup>	Desired Accuracy Level <sup>3</sup>
1-46	At Source	Flowable Materials: Coliwasa, Open Tube, or equivalent Non-flowable Materials: Tubing, Trier or equivalent Stratified Contents: Tank tap sample ports or equivalent In-line sampling: Sample ports or equivalent	Process Changes	pH  SBV  OBV  Density    Physical Description  Additional parameters <sup>2</sup>	1-9040, 1-9045, 4.150.1, 4-150.2  5-VAM 301A  5-VAM 101A  3-D1429, Hydrometer; Continuous-Acumet Densicheck Ultrasonic Meter  Observation by trained analyst  Determined by trained analyst according to the approved Waste Analysis Plan	Specified in Method or Method Detection Limit

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

Waste No. <sup>1</sup>	Sampling Location	Sampling Method <sup>2</sup>	Frequency	Parameter	Test Method <sup>2</sup>	Desired Accuracy Level <sup>3</sup>
1-62	Small Containers	Flowable Materials: Coliwasa, Open Tube or equivalent. Stratified Contents: Tap or equivalent Non-flowable Materials: Tubing, Trier or equivalent	10% Basis	pH  SBV  OBV  Density    Physical Description  Additional parameters <sup>2</sup>	1-9040, 1-9045, 4.150.1, 4-150.2  5-VAM 301A  5-VAM 101A  3-D1429, Hydrometer; Continuous-Acumet Densicheck Ultrasonic Meter  Observation by trained analyst  Determined by trained analyst according to approved Waste Analysis Plan	Specified in Method or Method Detection Limit

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

Waste No. <sup>1</sup>	Sampling Location	Sampling Method <sup>2</sup>	Frequency	Parameter	Test Method <sup>2</sup>	Desired Accuracy Level <sup>3</sup>
46-62	Tank Trucks	Liquids: Coliwasa or Open- tube sampler; Solids: Trier, shovel, coring or equivalent	Each Load	pH  SBV  OBV  Density   Physical Description  Additional parameters <sup>2</sup>	1-9040, 1-9045, 4.150.1, 4-150.2  5-VAM 301A  5-VAM 101A  3-D1429, Hydrometer; Continuous- Acumet Densicheck Ultrasonic Meter  Observation by trained analyst  Determined by trained analyst according to approved Waste Analysis Plan	Specified in Method or Method Detection Limit

<sup>1</sup>from Table IV.B, first column<sup>2</sup>as determined by appropriate personnel to meet processing or regulatory requirement

## **SECTION V – ENGINEERING REPORTS**



## 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.

##### 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).

##### 3. Construction Schedules

- 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.

**B. Container Storage Areas**

- 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

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

RESERVED

E. Waste Piles

RESERVED

F. Land Treatment Units

RESERVED

G. Landfills

RESERVED

H. Incinerators

RESERVED

I. Boilers and Industrial Furnaces

RESERVED

J. Drip Pads

RESERVED

K. Miscellaneous Units

RESERVED

L. Containment Buildings

RESERVED

**APPENDIX V.A**  
**GENERAL ENGINEERING REPORT**



## **ENGINEERING REPORTS PART B – SECTION V**

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
PERMIT RENEWAL APPLICATION FOR A HAZARDOUS WASTE  
STORAGE, PROCESSING, AND DISPOSAL FACILITY**

**HAZARDOUS WASTE PERMIT NO. 50025**

**DATE: SEPTEMBER 6, 2024**



**PREPARED FOR:**

**VOPAK LOGISTICS SERVICES USA, INC.  
VOPAK LOGISTICS SERVICES USA DEER PARK  
2759 INDEPENDENCE PARKWAY SOUTH  
DEER PARK, TEXAS 77536**

**PREPARED BY:**

**ENGICON ENVIRONMENTAL, LLC.  
1717 WEST 34<sup>TH</sup> STREET, SUITE 600 # 120  
HOUSTON, TEXAS, 77018**



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##### Appendix V.B.2: Engineering Reports and Drawings

### Appendix V.C. Tanks and Tank Systems

#### Table V.C: Tanks and Tank Systems

##### Appendix V.C.1: Secondary Containment Calculations

##### Appendix V.C.2: Engineering Reports and Drawings

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### Appendix V.L. Containment Buildings



## PROFESSIONAL ENGINEER CERTIFICATION

This certification is signed in reference to the General Engineering Report for:

**Name:** Vopak Logistics Services USA, Inc.  
Vopak Logistics Services USA Deer Park  
**Address:** 2759 Independence Parkway South  
Deer Park, Texas 77536

The undersigned Registered Professional Engineer (P.E.) is familiar with the requirements of the Resource Conservation and Recovery Act (RCRA) regulations under Title 40 of the Code of Federal Regulations (CFR) Part 270, and Title 30 of the Texas Administrative Code (TAC) Chapter 305 and Chapter 335, and has conducted an assessment of the permitted hazardous waste management facility under this renewal. The undersigned Registered P.E. attests that this Engineering Report has been prepared in accordance with good engineering practice, including consideration of applicable industry standards and the RCRA requirements.

*"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to 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 that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".*

This certification in no way relieves the owner or operator of the facility of his/her duty to maintain compliance with the federal and state regulations; and to properly operate, maintain, test, and inspect the hazardous waste management facility and components to include the secondary containment and associated equipment.

Engineer: Emile C. Hanna, P.E. Registration Number: 118603 / Texas



Seal, Signature and Date:

Engineering Firm: EngiCon Environmental, LLC Registration Number: F-21692 / Texas

## **1.0 INTRODUCTION**

The General Engineering Report is prepared for the Vopak Logistics Services USA Deer Park facility located at 2759 Independence Parkway South, Deer Park, Texas 77536 (hereafter referred to as VLS or the facility). The General Engineering Report has been prepared as part of the hazardous waste permit renewal application for the facility in accordance with Title 40 of the Code of Federal Regulations (CFR) Part 270 and Title 30 of the Texas Administrative Code (TAC) Chapter 305 and Chapter 335, and under the requirements of the Environmental Protection Agency (EPA) and the Texas Commission on Environmental Quality (TCEQ).

### **1.1 Purpose and Approach**

The objective of the General Engineering Report is to provide a conceptual basis for the storage, processing, and/or disposal units at the hazardous waste management facility. The General Engineering Report includes calculations and other such engineering information that are required as part of the permit renewal application. However, since this renewal application does not include modifications or major amendments, not all historical reports and/or engineering assessments are provided, and can be provided upon request, as necessary.

## 2.0 GENERAL INFORMATION

The facility is located at 2759 Independence Parkway South, Deer Park, Texas in Harris County, and within Vopak Terminal Deer Park, Inc. facility boundary inside the Deer Park Industrial District. It is located approximately 17 miles on the east side of the City of Houston, south of Interstate Highway 10, and north of Texas Highway 225. The facility's general location, topographic features, and adjacent water bodies are shown on the Facility Boundaries and Adjacent Waters Map.

### 2.1 Facility Description

VLS is comprised of approximately five acres of land, which is developed with buildings, structures, and outdoor storage areas that are used in facility operations. The hazardous waste management units (storage container areas and storage tanks) are and will be (e.g., Not Built Yet) located within the following areas:

- 05-F-4 Area;
- 500 Series Storage Area;
- CSA 05-D-1, current;
- CSA 05-D-1, proposed;
- CSA 05-D-3;
- Deepwell Injection Area;
- Emulsified Oil Treatment System (referred to as EOTs), current;
- EOTs, proposed;
- Heal Tank Area;
- Truck Unloading Area; and
- Wastewater Emulsified Oil Treatment System (referred to as WW EOTS).

The permitted hazardous waste management units are shown on the Facility Plot Plan.

The facility has been designed to store, treat and/or dispose several of TCEQ's hazardous and nonhazardous waste codes, and several of EPA's characteristically hazardous or listed hazardous waste or combination of waste listed in 40 CFR 261 (refer to Part A, Table III-1 – Hazardous Wastes and Management Activities).

### 2.2 Facility Maps

In accordance with 40 CFR §270.14(b)(19) and 40 CFR §270.14(d)(1)(i), several drawings have been prepared (or are provided) as part of the permit renewal application and include the following items:

- Facility Boundaries and Adjacent Waters Map;
- Facility Plot Plan; and
- Flood Plain Map.

### **3.0 MITIGATION OF FACILITY HAZARDS**

The procedures, structures, and/or equipment used at the hazardous waste management facility to manage or mitigate facility hazards are provided in accordance with 40 CFR §270.14(b)(8).

#### **3.1 Hazards in Unloading Operations**

The unloading operations at the facility are controlled by unloading procedures and are observed by facility personnel to minimize the potential of an accidental release. In addition the unloading areas, such as the Truck Unloading Area, have sufficient secondary containment capacity to control a release from a tank truck. Hazardous waste that is transported to the facility using portable containers (e.g., 55-gallon drums) is stored in the container storage areas, such as the 05-D-1. The container storage areas are designed with concrete ramps to unload the containers using forklifts that are operated by trained facility personnel.

#### **3.2 Runoff from Hazardous Waste Management Areas**

The hazardous waste management units (container storage areas and storage tanks) are located within secondary containment areas that are constructed of concrete surfaces that are either covered and/or impermeable, and that have sufficient containment capacity to contain precipitation from a 25-year, 24-hour rainfall event. Therefore, runoff is not discharged or released from the hazardous waste management facility.

#### **3.3 Flood Prevention**

As indicated earlier, the facility is not located within the 100-year floodplain. In addition, the facility's drainage features, and containment structures minimize the effects of a flooding event on the hazardous waste management units, to the extent practicable.

#### **3.4 Protection of Water Supplies**

The hazardous waste management units and associated secondary containment areas are inspected daily for any evidence of a leak, spill or deterioration (in addition to others, refer to the Inspection Schedule), and any issue observed will be resolved to limit the potential of hazardous waste from migrating to water supplies. In addition, in the unlikely event that a release migrates through or below the secondary containment, the facility is underlain by low-permeable soil that limits the migration of waste from the site to water supplies.

#### **3.5 Equipment Failure and Power Outages**

The availability of secondary containment areas at the facility can mitigate the effects of a temporary equipment failure and/or during a power outage. In addition, and if necessary, the facility will obtain portable emergency units to supply power to necessary equipment (e.g., pumps), if the situation requires it.

#### **3.6 Personnel Exposure to Hazardous Waste**

The facility policy requires all personnel to use the necessary personnel protective equipment (PPE) at all times during facility operations, and additional PPE is required on an area-specific or activity-specific basis.

In addition, fire extinguishers, eye wash stations and safety showers are available to facility personnel in the unloading and processing areas, in case of an emergency or during a hazardous waste release.

### **3.7 Releases to the Atmosphere**

Air emissions from the hazardous waste management facility are regulated in accordance with 40 CFR §264 Subpart BB and Subpart CC, and are authorized by the TCEQ under an air permit. In addition, the facility implements a Leak Detection and Repair program to monitor potential leaks from the tanks and equipment.

### **3.8 Management of Ignitable or Reactive Waste Streams**

Hazardous waste streams that are ignitable or reactive are stored separately to protect them from materials or conditions that may cause the waste to ignite or react. In general, ignition sources are prohibited within the hazardous waste management areas, or are strictly managed by internal facility procedures, permits and personnel. For instance, prior to initiating welding activities within an area, a hot work permit must be issued.

Pursuant to the Waste Analysis Plan, waste streams are checked for compatibility prior to commingling any waste streams to prevent unintended reactions or consequences. The container storage areas, and storage tanks that manage an ignitable or a reactive waste stream have sufficient distance between the waste management area and any public way, street, alley or adjoining property or lines that can be built on as required by the National Fire Protection Association, NFPA 30 "Flammable and Combustible Liquids Code."

## **4.0 CONSTRUCTION SCHEDULES**

The facility does not propose any areal expansion or the construction of a new container storage area or storage tank as part of the permit renewal application. However, several hazardous waste management units that were proposed in prior applications are not built, and are still proposed until constructed as detailed below.

### **4.1 Proposed Hazardous Waste Management Units**

The facility has several hazardous waste management units that are permitted, but have not been built yet, and are listed below. The proposed construction of the hazardous waste management units is within ten years of permit issuance. The facility does not propose the construction of any new units as part of this application.

- Permit Unit No. 20 – Tank ID No.: 05-T-23: Authorized, but Not Built Yet.
- Permit Unit No. 21 – Tank ID No.: 05-T-24: Authorized, but Not Built Yet.
- Permit Unit No. 22 – Tank ID No.: 05-T-25: Authorized, but Not Built Yet.
- Permit Unit No. 48 – CSA ID No.: 05-D-1: Expansion is Authorized, but Not Built Yet.
- Permit Unit No. 65 – Tank ID No.: 05-T-39: Authorized, but Not Built Yet.
- Permit Unit No. 66 – Tank ID No.: 05-T-40: Authorized, but Not Built Yet.
- Permit Unit No. 67 – Tank ID No.: 05-T-41: Authorized, but Not Built Yet.
- Permit Unit No. 68 – Tank ID No.: 05-T-42: Authorized, but Not Built Yet.

In addition, as-built certification of the constructed units will be submitted under a separate cover.

### **4.2 Permitted Hazardous Waste Management Units**

The facility does not propose the construction of or a revision to the permitted hazardous waste management units. All permitted hazardous waste management units have not changed since the permit renewal in 2014.

## 5.0 CONTAINER STORAGE AREAS

The facility currently operates two permitted container storage areas (CSA):

- Permit Unit No. 48 – CSA ID No.: 05-D-1: authorized as part of the permit renewal in 2002; and
- Permit Unit No. 50 – CSA ID No.: 05-D-3: no changes since permit renewal application in 2014.

Table V.B – Container Storage Area lists the container storage areas authorized by the permit.

The container storage areas are constructed of reinforced concrete floors with perimeter curbs to allow the storage of portable containers in Permit Unit No. 48 associated with CSA 05-D-1, and roll-off boxes in Permit Unit No. 50 associated with CSA 05-D-3. CSA 05-D-1 is covered and designed with concrete ramps to unload the containers using forklifts operated by trained facility personnel, while CSA 05-D-3 is not covered and is sloped to provide the safe movement of roll-off boxes over the curbs as needed during the transport activities.

Both container storage areas are located outside of the 100-year floodplain and are more than 15 meters (50 ft) from the property line. Design details can be found in the attached drawings and containment calculations.

Attached is a copy of select engineering reports and drawings available as part of the facility records.

### 5.1 Aisle Space

Sufficient aisle space between storage containers is necessary to allow the unobstructed movement of facility personnel, fire protection equipment, spill control and decontamination equipment during an emergency. In addition, facility personnel and/or contractor personnel will move the containers safely as necessary during cleanup and as practical. Therefore, the permit authorizes an aisle space of 30 inches between containers for Permit Unit No. 48 associated with CSA 05-D-1 and 24 inches between roll-off boxes for Permit Unit No. 50 associated with CSA 05-D-3. Such aisle space is sufficient to perform inspections and identify leaks or spills.

### 5.2 Secondary Containment

As indicated above, the container storage areas are constructed of concrete floors with perimeter curbs and provide sufficient secondary containment capacity to control a spill or a leak from the portable containers, plus precipitation (refer to secondary containment calculations). In addition, the concrete curbs prevent run-on from other facility areas. Overall, the secondary containment areas are sufficiently impervious and are sloped toward underground sumps to collect and remove a potential spill or a leak and accumulated precipitation from the area in a timely manner. Visual inspections are performed on a routine basis (refer to Inspection Schedule) to address any release from the portable containers promptly in the secondary containment areas.

### 5.3 Management of Containers

The containers remain closed at all times unless waste is being added or removed. In addition, the containers are managed in a manner that prevents rupturing or otherwise damaging the container, or causing it to leak. If a container is damaged or leaking, or if a container is identified not to be in good condition, then the contents are transferred into another container in good condition, or the container is placed in an overpack container.



In general, small containers (e.g., 55-gallon drums) that are used for waste storage will be stored on pallets (typically 4 inches above ground). Thus the pallets will minimize a spill or a leak from contacting the bottom of the containers. Spills will be typically managed using absorbents and pads, and will be removed in a timely manner. Should a large spill occur, other means such as a vacuum truck or a temporary tank may be used.

#### **5.4 Compatibility of Waste with Containers**

The facility follows container compatibility procedures to confirm that the storage containers used to store hazardous waste are compatible with the waste being stored. The CSA 05-D-1 is subdivided into several areas by concrete curbs for additional operational controls, and facilitating the storage of different waste types.

#### **5.5 Ignitable or Reactive Waste**

Ignitable and reactive waste streams stored in the container storage areas are isolated from ignition sources. Cutting, welding, open flames, frictional heat, hot surfaces or other ignition sources in the areas where ignitable wastes are stored are prohibited. In addition, smoking is prohibited throughout the facility.

In addition, containers holding ignitable or reactive waste streams are located at least 15 meters (50 feet) from the facility's property line in accordance with the requirement of 40 CFR 264.§176 and the NFPA 30 standards.

#### **5.6 Incompatible Waste**

Incompatible waste streams are not stored in the same storage containers, and facility personnel follow internal procedures to ensure that waste streams stored adjacent to other waste streams are compatible. In addition, portable containers (e.g., 55-gallon drums) are segregated within the storage container areas using concrete curbs and sumps, and each subdivided area is used to store waste streams that are compatible.

The permitted container storage areas are not used to manage non-hazardous wastes and/or universal waste.

## 6.0 TANKS AND TANK SYSTEMS

The facility currently operates several permitted tanks and tank systems located in storage areas as follows:

- 05-F-4 Area:
  - Permit Unit No. 55: 05-F-4.
- 500 Tank Series Storage Area:
  - Permit Unit No. 12: 05-T-6: no changes since permit renewal application in 2014;
  - Permit Unit No. 13: 05-T-7: no changes since permit renewal application in 2014;
  - Permit Unit No. 29: 05-T-563: no changes since permit renewal application in 2014;
  - Permit Unit No. 30: 05-T-567: no changes since permit renewal application in 2014;
  - Permit Unit No. 32: 05-T-583: no changes since permit renewal application in 2014;
  - Permit Unit No. 36: 05-T-589: no changes since permit renewal application in 2014;
  - Permit Unit No. 37: 05-T-590: no changes since permit renewal application in 2014; and
  - Permit Unit No. 38: 05-T-591: no changes since permit renewal application in 2014.
- Deepwell Injection Area:
  - Permit Unit No. 2: 05-T-1B: no changes since permit renewal application in 2014;
  - Permit Unit No. 3: 05-T-43: no changes since permit renewal application in 2014;
  - Permit Unit No. 4: 05-T-44: no changes since permit renewal application in 2014;
  - Permit Unit No. 5: 05-T-3: no changes since permit renewal application in 2014;
  - Permit Unit No. 7: 05-T-4B: no changes since permit renewal application in 2014;
  - Permit Unit No. 11: 05-T-5: no changes since permit renewal application in 2014;
  - Permit Unit No. 14: 05-T-8: no changes since permit renewal application in 2014;
  - Permit Unit No. 15: 05-T-9A: no changes since permit renewal application in 2014;
  - Permit Unit No. 16: 05-T-9B: no changes since permit renewal application in 2014;
  - Permit Unit No. 20: 05-T23: no changes since permit renewal application in 2014;
  - Permit Unit No. 21: 05-T24: no changes since permit renewal application in 2014;
  - Permit Unit No. 22: 05-T-25: no changes since permit renewal application in 2014;
  - Permit Unit No. 39: 05-C-1: no changes since permit renewal application in 2014.
  - Permit Unit No. 40: 05-C-2: no changes since permit renewal application in 2014;
  - Permit Unit No. 41: 05-C-3: no changes since permit renewal application in 2014;

- Permit Unit No. 42: 05-C-4: no changes since permit renewal application in 2014;
- Permit Unit No. 51: 05-F-1A: no changes since permit renewal application in 2014;
- Permit Unit No. 52: 05-T-F1B: no changes since permit renewal application in 2014;
- Permit Unit No. 53: 05-F-2: no changes since permit renewal application in 2014;
- Permit Unit No. 54: 05-F-3: no changes since permit renewal application in 2014;
- Permit Unit No. 74: 05-T-48: no changes since permit renewal application in 2014;
- Permit Unit No. 75: 05-T-49: no changes since permit renewal application in 2014; and
- Permit Unit No. 87: 05-V-2: a request to close and re-activate in 2019 and 2020.
- Emulsified Oil Treatment System (referred to as EOTs), current;
  - Permit Unit No. 9: 05-T-4D: no changes since permit renewal application in 2014;
  - Permit Unit No. 10: 05-T-4E: no changes since permit renewal application in 2014;
  - Permit Unit No. 18: 05-T-21: no changes since permit renewal application in 2014; and
  - Permit Unit No. 19: 05-T-22: no changes since permit renewal application in 2014;
- EOTs, not yet built;
  - Permit Unit No. 65: 05-T-39: no changes since permit renewal application in 2014;
  - Permit Unit No. 66: 05-T-40: no changes since permit renewal application in 2014;
  - Permit Unit No. 67: 05-T-41: no changes since permit renewal application in 2014; and
  - Permit Unit No. 68: 05-T-21: no changes since permit renewal application in 2014.
- Heal Tank Area;
  - Permit Unit No. 43: 05-T-51: no changes since permit renewal application in 2014;
  - Permit Unit No. 44: 05-T-52: no changes since permit renewal application in 2014;
  - Permit Unit No. 45: 05-T-53: no changes since permit renewal application in 2014;
  - Permit Unit No. 46: 05-T-54: no changes since permit renewal application in 2014; and
  - Permit Unit No. 47: 05-T-55: no changes since permit renewal application in 2014.
- Truck Unloading Area:
  - Permit Unit No. 57: 05-B-1: no changes since permit renewal application in 2014; and
  - Permit Unit No. 58: 05-B-2: no changes since permit renewal application in 2014.
- Wastewater Emulsified Oil Treatment System (referred to as WW EOTS).
  - Permit Unit No.63: 05-T-574: authorized as part of the permit renewal in 2014; and
  - Permit Unit No.64: 05-T-575: authorized as part of the permit renewal in 2014.

Table V.C – Tanks and Tanks Systems lists the tanks and tanks systems authorized by the permit.

The tanks and tank systems are located in storage areas that are constructed of reinforced concrete floors with perimeter curbs or walls. In addition, these storage areas are located outside of the 100-year floodplain and are more than 15 meters (50 ft) from the property lines. Design details can be found in the attached drawings and containment calculations.

## **6.1 Integrity Assessment**

The tanks and tank systems have been designed, constructed and installed in accordance with the design standards of the American Petroleum Institute (API), the American Society for Testing and Materials (ASTM), and the NFPA as applicable. In addition, routine inspections including those performed by API Certified inspectors to include external, internal and thickness determinations ensure that the tank and tank systems do not collapse, rupture or fail. Therefore the tanks and tank systems are in compliance with 40 CFR §264.191.

## **6.2 Design and Installation Assessment**

H&M Design, Inc. designed the tanks and tank systems currently permitted under the hazardous waste management facility, and the engineering reports were previously certified and assessed by a professional engineer. These reports were provided to TCEQ in the prior permit applications, including the renewal in 2014.

Attached is a copy of select engineering reports and drawings available as part of the facility records.

Therefore the tanks and tank systems are in compliance with 40 CFR §264.192.

## **6.3 Secondary Containment**

As indicated above, the storage areas are constructed of concrete floors with perimeter curbs or walls and provide sufficient secondary containment capacity to control a spill or a leak from the tanks and/or tanks systems, plus precipitation (refer to secondary containment calculations). In addition, the concrete curbs or walls prevent run-on from other facility areas. Overall, the secondary containment areas are sufficiently impervious and are sloped toward underground sumps equipped with a dedicated pump to collect and remove a potential spill or a leak and accumulated precipitation from the area in a timely manner. These sumps are hard-piped to available capacity located in the 500 Tank Series (e.g., 05-T-583 and/or 05-T-589).

Visual inspections are performed on a routine basis (refer to Inspection Schedule) to address any release from the tanks and/or tank systems or associated equipment including piping, valves, pumps and others promptly in the secondary containment areas.

Therefore the tanks and tank systems are in compliance with 40 CFR §264.193.

## **6.4 General Operating Requirements**

The facility will not place into the tanks or tank systems hazardous waste streams that will cause them to rupture, leak, corrode or otherwise fail. In addition, facility personnel manage and process hazardous wastes that are only approved for the tanks and tank systems, as authorized under this permit.

The secondary containment areas are used to prevent spills and releases from the tanks and tank systems. In addition, the tanks and tank systems are equipped with controls to prevent them from being overfilled.

Therefore the tanks and tank systems are in compliance with 40 CFR §264.194.

## **6.5 Inspections**

As indicated earlier, the facility performs routine facility inspections including those performed by API Certified inspectors to include external, internal and thickness determinations to ensure the tanks are maintained and any leaks are discovered and fixed. Refer to the Inspection Plan and Inspection Schedule found in Section III.

Therefore the tanks and tank systems are in compliance with 40 CFR §264.195.

## **6.6 Emergency Response**

The facility has prepared and implemented a Hazardous Waste Contingency Plan for emergency response procedures in addition to spill response and removal procedures as applicable to the facility during an incident.

Therefore the tanks and tank systems are in compliance with 40 CFR §264.196.

## **6.7 Closure and Post-Closure Care**

Information pertaining to closure and cost of closure is provided in Section VII of the permit application.

Therefore the tanks and tank systems are in compliance with 40 CFR §264.197.

## **6.8 Ignitable and Reactive Waste**

Ignitable and reactive waste streams stored in the tanks and tank systems are isolated from ignition sources. Cutting, welding, open flames, frictional heat, hot surfaces or other ignition sources in the areas where ignitable wastes are stored are prohibited. In addition, smoking is prohibited throughout the facility.

In addition, ignitable or reactive waste stream that is stored or treated in a tank or a tank system complies with the requirements for the maintenance of protective distances between the waste management areas and any public ways, streets, alleys, or an adjoining property line that can be built upon as required by the current NFPA "Flammable and Combustible Liquids Code."

Therefore the tanks and tank systems are in compliance with 40 CFR §264.198.

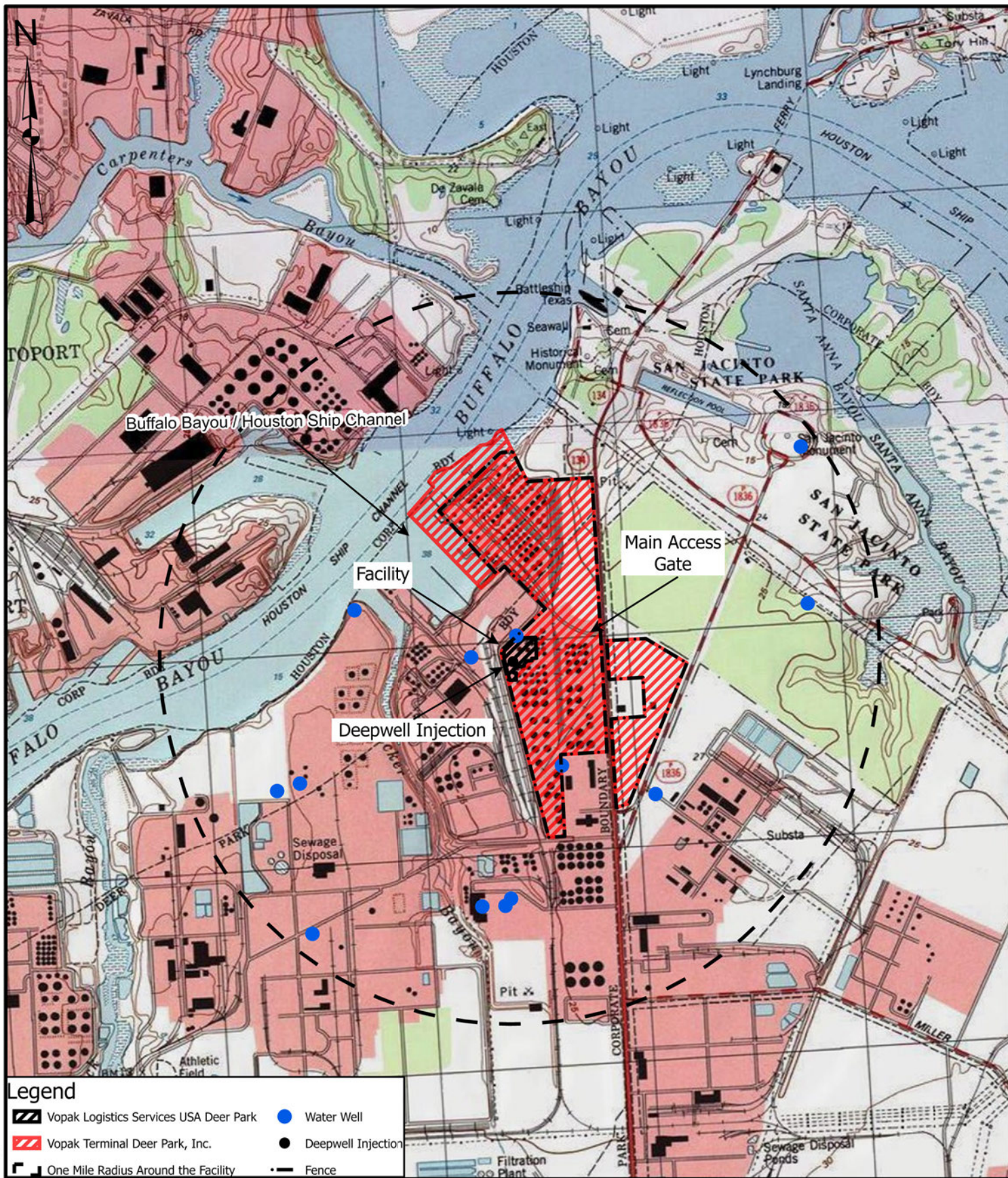
## **6.9 Incompatible Waste**

Incompatible waste streams are not stored in the same storage tanks, and facility personnel follow internal procedures to ensure that waste streams that are stored and processed for treatment are compatible. In addition, incompatible waste streams which are not compatible with the tank materials are not placed into the tank or tank systems. The waste streams are identified prior to treatment as detailed in the Waste Analysis Plan.

Therefore the tanks and tank systems are in compliance with 40 CFR §264.199.

## **APPENDIX V.A GENERAL INFORMATION**





Source: Vopak Logistics Services USA, Inc., ArcGIS Data, and Harris County Appraisal District

Note: Drawing to be used for Permitting Purposes Only

Revision No.1  
Date: January 20, 2025

Date: July 31, 2024

Vopak Logistics Services USA, Inc.  
2759 Independence Parkway South  
Deer Park, Texas 77536

0 1,000 2,000 4,000 Feet  
Scale 1" = 2,000'

Prepared By: EngiCon Environmental, LLC

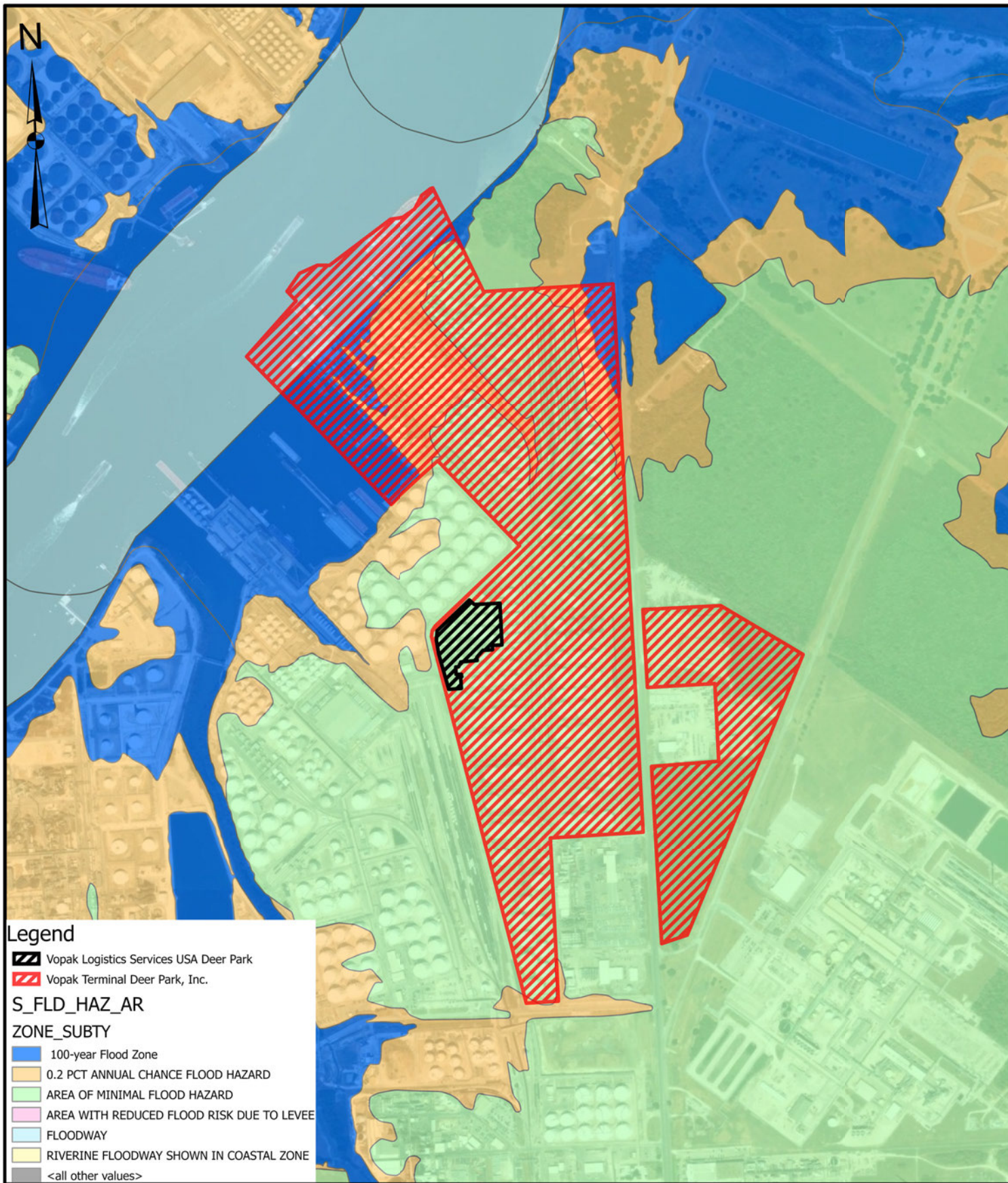
Facility Boundaries  
and  
Adjacent Waters Map

**EngiCon**  
Environmental









Source: FEMA Firm Map No. 48201C0930M.

Vopak Logistics Services USA, Inc.  
2759 Independence Parkway South  
Deer Park, Texas 77536

0 500 1,000 2,000  
Feet  
Scale 1" = 2,000'

Note: Drawing to be used for Permitting Purposes Only

Date: July 31, 2024

Prepared By: EngiCon Environmental, LLC

Flood Plain Map

**EngiCon**  
Environmental

Hi Emile!  
Log out

[Privacy Policy](#)

Data Selector

See Data Values

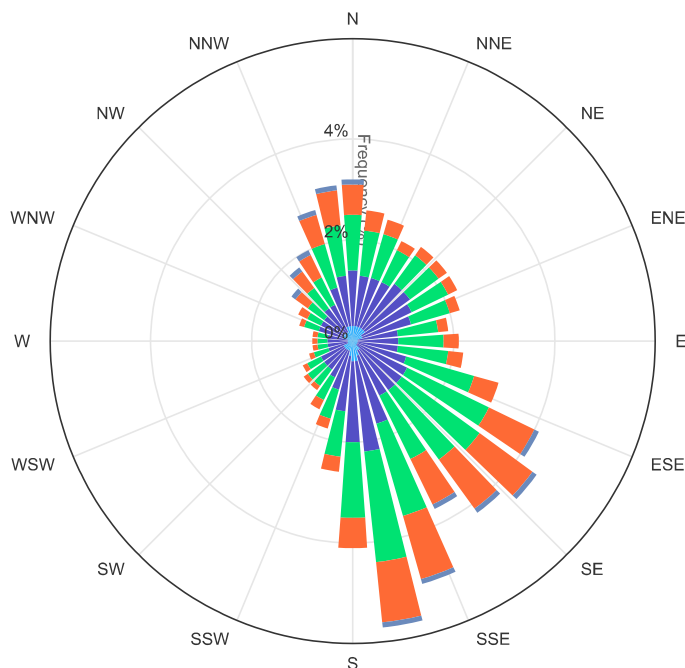
Data CSV Version

Product Description

[Send Feedback](#)

## HOUSTON INTERCONTINENTAL AP (TX) Wind Rose

September 01, 1969 - September 01, 2024  
Sub-Interval: January 1 - December 31, 0 - 24



Click and drag to zoom

### HOUSTON INTERCONTINENTAL AP (TX)- Wind Frequency Table (percentage)

Start Date : September 01, 1969  
End Date : September 01, 2024  
# of Days : 20090 of 20090  
# obs : poss : 461190 of 482160

Latitude : 29.9844  
Longitude : -95.3607  
Elevation : 90 ft.  
Element : Mean Wind Speed

Sub Interval Windows  
Start End  
Date January December  
1 31  
Hour 0 24

(Greater than or equal to initial interval value and Less than ending interval value.)

Range (mph)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280
1.3 - 4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
4 - 8	1.1	1.0	1.0	1.0	1.1	1.1	1.1	1.0	0.8	0.8	0.8	1.0	1.1	1.1	1.0	1.0	1.4	1.8	1.6	1.1	0.8	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4
8 - 13	1.1	0.9	0.9	0.7	0.7	0.7	0.8	0.8	0.8	0.9	1.0	1.4	1.8	1.9	1.7	1.4	1.9	2.2	1.5	0.9	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2
13 - 19	0.6	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.5	1.0	1.3	1.2	1.0	1.3	1.2	0.6	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
19 - 25	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25 - 32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32 - 39	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 - 47	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47 -	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	3.1	2.7	2.6	2.3	2.3	2.2	2.3	2.2	1.9	2.2	2.3	3.0	4.2	4.6	4.2	3.8	5.0	5.6	4.2	2.7	1.9	1.5	1.3	1.2	1.1	0.9	0.8	0.8	0.8
Calm (<1.3)																													
Ave Speed	8.9	8.5	8.1	7.7	7.4	7.4	7.7	7.8	8.2	8.6	8.8	9.1	9.8	10.4	10.4	10.2	9.9	9.3	8.4	8.1	7.8	7.9	7.8	7.6	7.4	7.2	7.0	7.2	7.6

This tool uses standard hourly observations based on raw (non-quality controlled) decoded metar data from the [ACIS-hourly](#) database. Sub-hourly data (one-minute data, five-minute data, and special observations) are not included but are available from NCEI. Midwestern Regional Climate Center cli-MATE: MRCC Application Tools Environment Generated at: 9/10/2024 4:06:55 PM EDT

**TABLE V.A**  
**FACILITY WASTE MANAGEMENT HANDLING UNITS**

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

TCEQ Permit Unit No. <sup>1</sup>	Unit Name	NOR No. <sup>1</sup>	Unit Description <sup>3</sup>	Capacity	Unit Status <sup>2</sup>
001	05-T-1A	002	Storage and Processing Tank	50,000 gallons	Closed
002	05-T-1B	022	Storage and Processing Tank	50,000 gallons	Active
003	05-T-43	023	Storage and Processing Tank	15,994 gallons	Active
004	05-T-44	024	Storage and Processing Tank	2,632 gallons	Active
005	05-T-3	025	Storage Tank	20,000 gallons	Active
006	05-T-4A	026	Storage and Processing Tank	21,000 gallons	Closed
007	05-T-4B	027	Storage and Processing Tank	21,000 gallons	Active
008	05-T-4C	028	Storage and Processing Tank	23,000 gallons	Closed
009	05-T-4D	029	Storage and Processing Tank	4,625 gallons	Active
010	05-T-4E	030	Storage and Processing Tank	4,625 gallons	Active
011	05-T-5	031	Storage and Processing Tank	200,000 gallons	Active
012	05-T-6	032	Storage Tank	21,150	Active



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

TCEQ Permit Unit No. <sup>1</sup>	Unit Name	NOR No. <sup>1</sup>	Unit Description <sup>3</sup>	Capacity	Unit Status <sup>2</sup>
013	05-T-7	033	Storage Tank	20,000 gallons	Active
014	05-T-8	034	Storage and Processing Tank	20,305 gallons	Active
015	05-T-9A	035	Storage and Processing Tank	24,000 gallons	Active
016	05-T-9B	036	Storage and Processing Tank	21,000 gallons	Active
017	05-T-9C	037	Storage Tank	5,600 gallons	Closed
018	05-T-21	038	Storage and Processing Tank	19,990 gallons	Active
019	05-T-22	039	Storage and Processing Tank	19,990 gallons	Active
020	05-T-23	040	Storage and Processing Tank	20,000 gallons	Not Yet Built
021	05-T-24	041	Storage and Processing Tank	20,000 gallons	Not Yet Built
022	05-T-25	042	Storage and Processing Tank	20,000 gallons	Not Yet Built
029	05-T-563	049	Storage and Processing Tank	504,000 gallons	Active

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

TCEQ Permit Unit No. <sup>1</sup>	Unit Name	NOR No. <sup>1</sup>	Unit Description <sup>3</sup>	Capacity	Unit Status <sup>2</sup>
030	05-T-567	050	Storage and Processing Tank	504,000 gallons	Inactive
032	05-T-583	052	Storage and Processing Tank	504,000 gallons	Active
033	05-T-584	053	Storage and Processing Tank	504,000 gallons	Closed
034	05-T-585	054	Storage and Processing Tank	504,000 gallons	Closed
036	05-T-589	056	Storage and Processing Tank	504,000 gallons	Active
037	05-T-590	057	Storage and Processing Tank	504,000 gallons	Active
038	05-T-591	058	Storage and Processing Tank	126,900 gallons	Active
039	05-C-1	059	Processing Tank	74,000 gallons	Active
040	05-C-2	060	Processing Tank	1,175 gallons	Active
041	05-C-3	061	Processing Tank	2,277 gallons	Active
042	05-C-4	062	Processing Tank	288 gallons	Active
043	05-T-51	063	Storage Tank	11,700 gallons	Active

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

TCEQ Permit Unit No. <sup>1</sup>	Unit Name	NOR No. <sup>1</sup>	Unit Description <sup>3</sup>	Capacity	Unit Status <sup>2</sup>
044	05-T-52	064	Storage Tank	12,000 gallons	Active
045	05-T-53	065	Storage Tank	10,100 gallons	Active
046	05-T-54	066	Storage Tank	10,100 gallons	Active
047	05-T-55	067	Storage Tank	10,400 gallons	Active
048	05-D-1	005	Container Storage Area	89,760 gallons / 153,120 gallons	Active / Not Yet Built
050	05-D-3	014	Container Storage Area	49,692 gallons	Active
051	05-F-1A	078	Processing Tank	958 gallons	Active
052	05-F-1B	079	Processing Tank	958 gallons	Active
053	05-F-2	069	Processing Tank	24 gallons	Active
054	05-F-3	070	Processing Tank	24 gallons	Active
055	05-F-4	080	Processing Tank	400 gallons	Active
056	05-V-1	071	Processing Tank	37 gallons	Closed

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

TCEQ Permit Unit No. <sup>1</sup>	Unit Name	NOR No. <sup>1</sup>	Unit Description <sup>3</sup>	Capacity	Unit Status <sup>2</sup>
057	05-B-1	017	Storage Tank	7,687 gallons	Active
058	05-B-2	018	Storage Tank	7,687 gallons	Active
063	05-T-574	081	Storage and Processing Tank	20,305 gallons	Active
064	05-T-575	107	Storage and Processing Tank	20,305 gallons	Active
065	05-T-39	108	Storage and Processing Tank	20,305 gallons	Not Yet Built
066	05-T-40	109	Storage and Processing Tank	20,305 gallons	Not Yet Built
067	05-T-41	110	Storage and Processing Tank	20,305 gallons	Not Yet Built
068	05-T-42	111	Storage and Processing Tank	20,305 gallons	Not Yet Built
074	05-T-48	112	Storage and Processing Tank	1,190 gallons	Active
075	05-T-49	113	Storage and Processing Tank	2,490 gallons	Active
087	05-V-2	117	Processing Tank	37 gallons	Active

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

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

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



**APPENDIX V.B**  
**CONTAINER STORAGE AREA**

**TABLE V.B**  
**CONTAINER STORAGE AREA**

**Table V.B. - Container Storage Area**

Permit Unit No.	Container Storage Area	N.O.R. No.	Waste Nos. <sup>4</sup>	Rated Capacity <sup>3</sup>	Dimensions	Containment Volume (including rainfall for unenclosed areas)	Unit will manage Ignitable <sup>1</sup> , Reactive <sup>1</sup> , or Incompatible <sup>2</sup> waste (state all that apply)	Unit Status
048	05-D-1	005	All	89,760 gallons	4,166 square feet	9,471 gallons	Ignitable, Reactive & Incompatible	Active
048	05-D-1	005	All	153,120 gallons	7,570 square feet	23,736 gallons	Ignitable, Reactive & Incompatible	Not Yet Built
050	05-D-3	014	All	49,692 gallons	6,105 square feet	6,684 gallons	Ignitable, Reactive & Incompatible	Active

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

## **APPENDIX V.B.1**

### **SECONDARY CONTAINMENT CALCULATIONS**

### CONTAINER STORAGE AREA (CSA) 05-D-1 SECONDARY CONTAINMENT CALCULATIONS

Total Capacity = 89,760 gallons

Additional Bulk Storage Contents = 275-gallon and/or 330-gallon totes and 55-gallon drums.

Containment <sup>(1)</sup> - Concrete Wall		Dimensions		Unit
Containment Length 1 =		42.00		feet
Containment Width 1 =		38.00		feet
Containment Height 1 =		0.33		feet
Containment 1 Capacity =		532.00		feet <sup>3</sup>
Containment Length 2 =		56.50		feet
Containment Width 2 =		18.50		feet
Containment Height 2 =		0.50		feet
Containment 2 Capacity =		1,045.25		feet <sup>3</sup>
Underground Trench =				
Trench Length =		37.00		feet
Trench Width =		1.00		feet
Trench Depth =		0.75		feet
Underground Trench Capacity =		55.50		feet <sup>3</sup>
Total Containment Capacity =		1,633		feet <sup>3</sup>
		12,214		gallon
Displacement <sup>(2)</sup>				
Wood Pallet =				
Length =		4.00		feet
Width =		3.33		feet
Height =		0.25		feet
Displacement By One Wood Pallet =		3.33		feet <sup>3</sup>
Displacement By 50 Wood Pallets in Area IA =		166.67		feet <sup>3</sup>
Displacement By 30 Wood Pallets in Area IIA =		100.00		feet <sup>3</sup>
Displacement By 30 Wood Pallets in Area IIB =		100.00		feet <sup>3</sup>
Total Displacement =		366.67		feet <sup>3</sup>
		2,743		gallon
Freeboard Calculation: Based on 110% Rule of Thumb <sup>(2)</sup>				
Largest Storage Container =		330		gallon
10% of Largest Storage Container =		33		gallon
Estimated Required Freeboard =		33		gallon
Summary Calculations: Based on 25-Year, 24-Hour Rain Event				
Containment Capacity		12,214		gallon
Total Displacement		2,743		gallon
Estimated Required Freeboard		33		gallon
Net Containment Capacity <sup>(3)</sup>		9,438		gallon
10% of Total Capacity	USE	8,976		gallon
Intermediate Bulk Container (330 gallon tote)		330		gallon
Additional Capacity <sup>(4)</sup>		462		gallon

(1) Field data was collected on July 3<sup>rd</sup> 2024.

Measurements were collected from the inside one wall to the inside of the next wall.

(2) Container Storage Areas will be located under a cover. Precipitation is accounted for windblown rain.

(3) Net Containment Capacity = Containment Capacity - Total Displacement - Required Freeboard.

(4) Additional Capacity is calculated as Net Containment Capacity - 10% of Total Capacity.

**Secondary Containment has sufficient capacity to contain contents of the largest container, and precipitation based on the "rule of thumb" of 110% of the container capacity.**



### CONTAINER STORAGE AREA (CSA) 05-D-1 - PROPOSED SECONDARY CONTAINMENT CALCULATIONS

Total Capacity = 153,120 gallons

Additional Bulk Storage Contents = 275-gallon and/or 330-gallon totes and 55-gallon drums.

Containment <sup>(1)</sup> - Concrete Wall		Dimensions		Unit
Containment Length 1 =		42.00		feet
Containment Width 1 =		38.00		feet
Containment Height 1 =		0.33		feet
Containment 1 Capacity =		532.00		feet <sup>3</sup>
Containment Length 2 =		56.50		feet
Containment Width 2 =		18.50		feet
Containment Height 2 =		0.50		feet
Containment 2 Capacity =		1,045.25		feet <sup>3</sup>
Additional Containment Length 1 =		41.42		feet
Additional Containment Width 1 =		36.83		feet
Additional Containment Height 1 =		0.67		feet
Additional Containment 1 Capacity =		1,017.01		feet <sup>3</sup>
Additional Containment Length 2 =		41.42		feet
Additional Containment Width 2 =		36.83		feet
Additional Containment Height 2 =		0.67		feet
Additional Containment 2 Capacity =		1,017.01		feet <sup>3</sup>
Additional Containment Area 1B =		193.00		feet <sup>3</sup>
Underground Trench =				
Trench Length =		37.00		feet
Trench Width =		1.00		feet
Trench Depth =		0.75		feet
Underground Trench Capacity =		55.50		feet <sup>3</sup>
Total Containment Capacity =		3,860		feet <sup>3</sup>
		28,873		gallon
Displacement <sup>(2)</sup>				
Wood Pallet =				
Length =		4.00		feet
Width =		3.33		feet
Height =		0.25		feet
Displacement By One Wood Pallet =		3.33		feet <sup>3</sup>
Displacement By 50 Wood Pallets in Area IA =		166.67		feet <sup>3</sup>
Displacement By 0 Wood Pallets in Area IB =		0.00		feet <sup>3</sup>
Displacement By 30 Wood Pallets in Area IIA =		100.00		feet <sup>3</sup>
Displacement By 30 Wood Pallets in Area IIB =		100.00		feet <sup>3</sup>
Displacement By 48 Wood Pallets in Area III =		160.00		feet <sup>3</sup>
Displacement By 48 Wood Pallets in Area IV =		160.00		feet <sup>3</sup>
Total Displacement =		686.67		feet <sup>3</sup>
		5,137		gallon
Freeboard Calculation: Based on 110% Rule of Thumb <sup>(2)</sup>				
Largest Storage Container =		330		gallon
10% of Largest Storage Container =		33		gallon
Estimated Required Freeboard =		33		gallon
Summary Calculations: Based on 25-Year, 24-Hour Rain Event				
Containment Capacity		28,873		gallon
Total Displacement		5,137		gallon
Estimated Required Freeboard		33		gallon
Net Containment Capacity <sup>(3)</sup>		23,703		gallon
10% of Total Capacity	USE	15,312		gallon
Intermediate Bulk Container (330 gallon tote)		330		gallon
Additional Capacity <sup>(4)</sup>		8,391		gallon



(1) Field data was collected on July 3<sup>rd</sup> 2024.

Measurements were collected from the inside one wall to the inside of the next wall.

Proposed Containment Areas are based on Vopak Logistics Services USA Deer Park.

(2) Container Storage Areas will be located under a cover. Precipitation is accounted for windblown rain.

(3) Net Containment Capacity = Containment Capacity - Total Displacement - Required Freeboard.

(4) Additional Capacity is calculated as Net Containment Capacity - 10% of Total Capacity.

Secondary Containment has sufficient capacity to contain contents of the largest container, and precipitation based on the "rule of thumb" of 110% of the container capacity.



### CONTAINER STORAGE AREA (CSA) 05-D-3 SECONDARY CONTAINMENT CALCULATIONS

Total Capacity = 49,692 gallons

Bulk Storage Contents = Three 2-cubic yard bins; and Eight 25-cubic yard bins.

Containment <sup>(1)</sup> - Concrete Wall		Dimensions		Unit
Containment Length 1 =			100.00	feet
Containment Width 1 =			35.50	feet
Containment Height 1 =			0.25	feet
Containment 1 Capacity =			887.50	feet <sup>3</sup>
Catch Basin Capacity				
Catch Basin Length =			2.00	feet
Catch Basin Width =			2.00	feet
Catch Basin Depth =			0.75	feet
Catch Basin Capacity =			6.00	feet <sup>3</sup>
Total Containment Capacity =			894	feet <sup>3</sup>
			6,684	gallon
Displacement <sup>(2)</sup>				
None.				
Freeboard Calculation: Based on 25-Year, 24-Hour Rain Event <sup>(2)</sup>				
25 Year, 24-Hour Rain event =			1.03	feet
Total Containment Area =			3,550	feet <sup>2</sup>
Estimated Required Freeboard =			3,639	feet <sup>3</sup>
			27,220	gallon
Summary Calculations: Based on 25-Year, 24-Hour Rain Event				
Containment Capacity			6,684	gallon
Total Displacement			0	gallon
Available Containment Capacity			6,684	gallon
Estimated Required Freeboard			27,220	gallon
Net Containment Capacity <sup>(3)</sup>			-20,536	gallon
10% of Total Capacity			4,969	gallon
Largest Container Capacity (25-cubic yard bin)		USE	5,050	gallon
Additional Capacity <sup>(4)</sup>			-25,586	gallon
Stormwater collection system does have additional capacity to collect a release and contain it onsite <sup>(5)</sup>				
Additional Secondary Containment Capacity <sup>(6)</sup>			216,695	gallon
Additional Net Containment Capacity			191,109	gallon

(1) Field data was collected on July 3<sup>rd</sup> 2024.

Measurements were collected from the inside one wall to the inside of the next wall.

(2) Precipitation data from NOAA Atlas 14 [https://hdsc.nws.noaa.gov/hdsc/pfds/pfds\\_map\\_cont.html](https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html). NOAA released the precipitation data in September 2018, and the data was obtained on July 18, 2024.

(3) Net Containment Capacity = Containment Capacity - Total Displacement - Required Freeboard.

(4) Additional Capacity is calculated as Net Containment Capacity - Capacity of Largest Container.

(5) The Stormwater Collection System has sufficient capacity to control a release from CSA 05-D-3 and to pump it to the Deepwell Injection Area for storage during a 25-year, 24-hour rain event.

(6) Additional Secondary Containment includes Deepwell Injection Area.

**Secondary Containment has sufficient capacity to contain contents of the largest storage container and precipitation based on a 25-year, 24-hour rain event (12.3 inches).**



## **APPENDIX V.B.2**

### **ENGINEERING REPORTS AND DRAWINGS**



Pam Smolen  
Vopak Industrial Services  
2579 Battleground Road  
Deer Park, Texas 77563-0897

Reference: Certification for Drum Pad 05-D-1

Dear Ms. Smolen,

Enclosed is the certification for TNRCC Unit No. 48 (Drum Pad 05-D-1) as required by permit No. HW-50025.

If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

A handwritten signature in dark ink, appearing to read "Lloyd C. Doud, P.E.", is written over the typed name.

Lloyd C. Doud P.E.  
Reg. No. 14153


**CERTIFICATION REPORT  
FOR DESIGN OF  
05-D-1  
DRUM PAD**

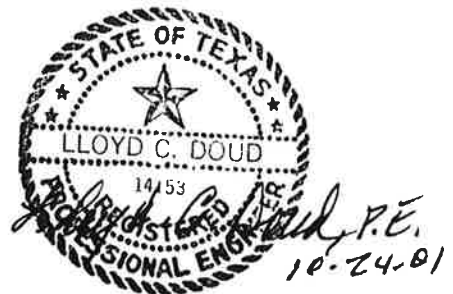
**VOPAK INDUSTRIAL SERVICES USA INC.  
DEER PARK, TEXAS  
PERMIT NO. HW-50025  
NOVEMBER 2001**

## CERTIFICATION

This is to certify that the design for the Drum Pad (05-D-1) located well within the boundaries of the Vopak Industrial Services USA Inc. Deer Park plant site has been completed in conformance with the design and construction requirements of 40CFR 264.175.

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 be the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

  
Lloyd C. Doud, P.E.  
Registration No. 14153  
H&M Design, Inc.



## Table of Contents

Report Summary

Response to Regulations

Attachment I          Design and Construction Information

Attachment II          List of Authorized Wastes

Attachment III          Inspection Forms

## REPORT SUMMARY

### 05-D-1 Drum Pad

This report documents H&M Design, Inc.'s design assessment of the Drum Pad 05-D-1, NOR 5 as required under 40 CFR 264 Subpart I and 40 CFR 270.15.

This Drum Pad is a container storage area that has an existing capacity of 89,760 gallons and will be expanded to a capacity of 153,120 gallons (See Attachment I). The container storage area is intended to hold hazardous waste containers of various shapes and sizes, which may contain corrosive wastes as well as wastes containing trace concentrations of organic and inorganic hazardous constituents.

Specifically, this assessment has included the following:

- A. The standards to which this container storage area is designed and to be built, to the best of our knowledge, meets or exceeds all accepted industry practices.
- B. The container storage area design is compatible with the nature of hazardous materials, as identified by Vopak Industrial Services USA Inc., with which it will be in contact.
- C. The materials stored in the container storage area will not be in direct contact with the soil. Therefore, soil characteristics as well as corrosion protection of the container storage area was not considered to be a significant part of this assessment.
- D. The container storage area foundation is designed to maintain the full load of a pallet of full drums stacked (3) high.
- E. Due to location, considerations such as frost heave and seismic activity are not considered significant and therefore are not considered part of this assessment.
- F. Waste drums and containers will be of various shapes and sizes.
- G. Operating Procedures provide for early detection of leaks.

## RESPONSE TO REGULATIONS

### 40 CFR Ch. 1 Part 264.170

#### Applicability

The regulations in this subpart apply to owners and operators of all hazardous waste facilities that store containers of hazardous waste, except as Part 264. 1 provides otherwise.

**This is an expansion of an existing container storage area and therefore must meet the requirements of this subpart.**

### 40 CFR Ch. 1 Part 264.172

#### Compatibility of waste with containers

The owner or operator must use a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.

**The operating procedures provide for the evaluation of all incoming containers to assure that the container is compatible with the waste to be stored.**

### 40 CFR Ch. 1 Part 264.175

#### Containment

- (a) Container storage areas must have a containment system that is designed and operated in accordance with paragraph (b) of this section, except as otherwise provided by paragraph (c) of this section.
- (b) A containment system must be designed and operated as follows:
  - (1) A base must underly the containers which is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed;

**The container storage area will be located on a concrete slab with curbs that will have secondary coating. (See Attachment I and Secondary Containment Coating Report 05-200-0001)**

- (2) The base must be sloped or the containment system must be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids;

**The base of the CSA is designed to be sloped.**

- (3) The containment system must have sufficient capacity to contain 10% of the volume of containers or the volume of the largest container, whichever is greater. Containers that do not contain free liquids need not be considered in this determination.
- (4) Run-on into the containment system must be prevented unless the collection system has sufficient excess capacity in addition to that required in paragraph (b)(3) of this section to contain any run-on which might enter the system; and

**The CSA area has concrete curbs to prevent run-ons from other areas, and has an existing roof that will be expanded to cover the new sections.**

- (5) Spilled or leaked waste and accumulated precipitation must be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system.

**The above requirement is part of the operating procedures. Leak detection is part of mandated daily inspection of the area.**

- (c) Storage areas that store containers holding only wastes that do not contain free liquids need not have a containment system defined by paragraph (b) of this section, except as provided by paragraph (d) of this section or provided that:
  - (1) The storage area is sloped or is otherwise designed and operated to drain and remove liquid resulting from precipitation, or
  - (2) The containers are elevated or are otherwise protected from contact with accumulated liquid.
- (d) Storage areas that store containers holding the wastes listed below that do not contain free liquids must have containment defined by paragraph (b) of this section
  - (1) FO20, FO21, FO22, FO23, FO26 and FO27
  - (2) [Reserved]

**40 CFR Ch. 1 Part 264.176**

Special requirements for ignitable or reactive waste

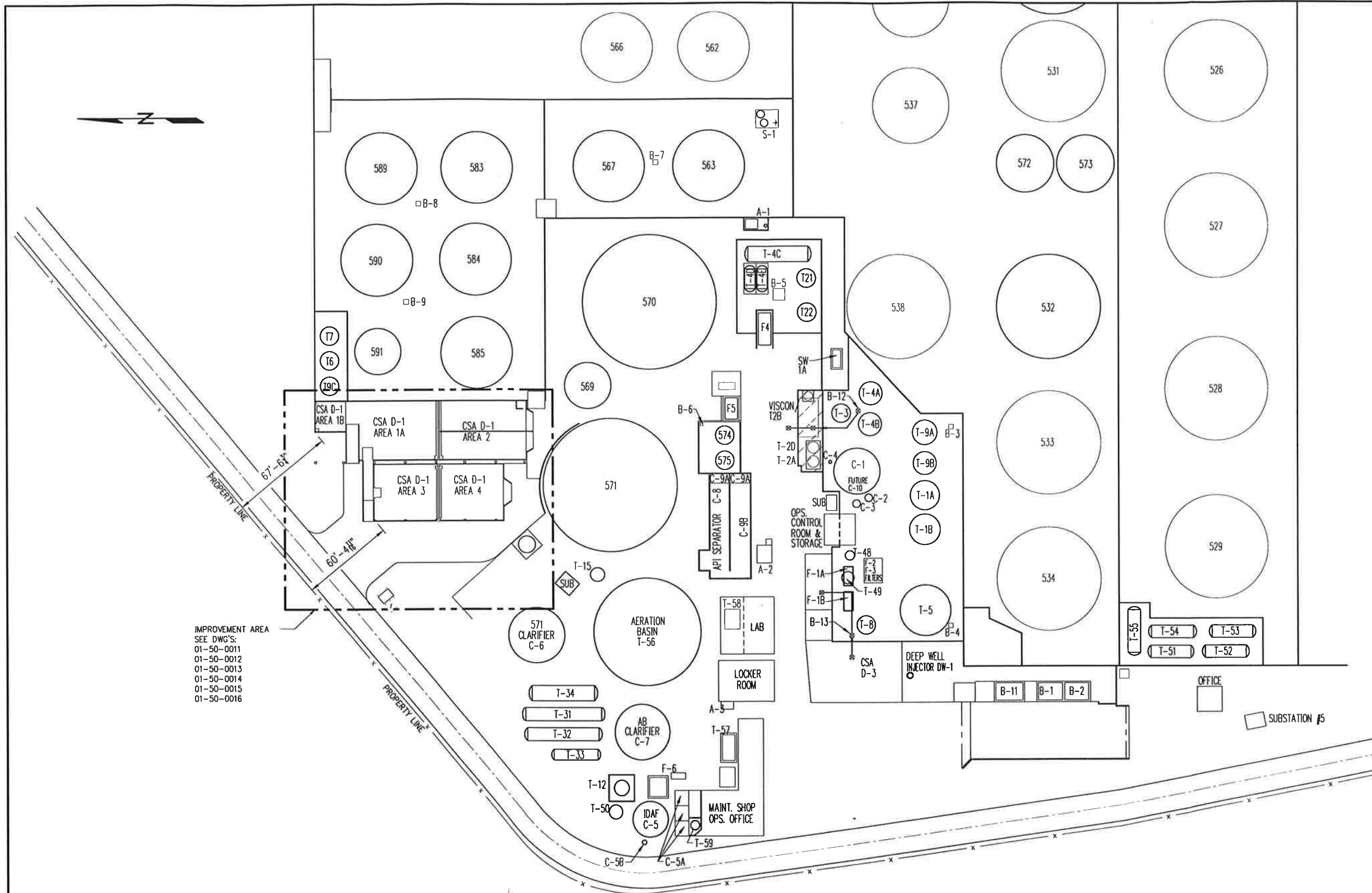
Containers holding ignitable or reactive waste must be located at least 15 meters (50 feet) from the facility's property line.

**Container Storage area is greater than 50 feet from property line.  
Flammables and combustibles cannot be stored in Area 4 due to proximity to oxygen (NFPA50 Fig. A-2-2)**

**ATTACHMENT I**  
**DESIGN AND CONSTRUCTION INFORMATION**





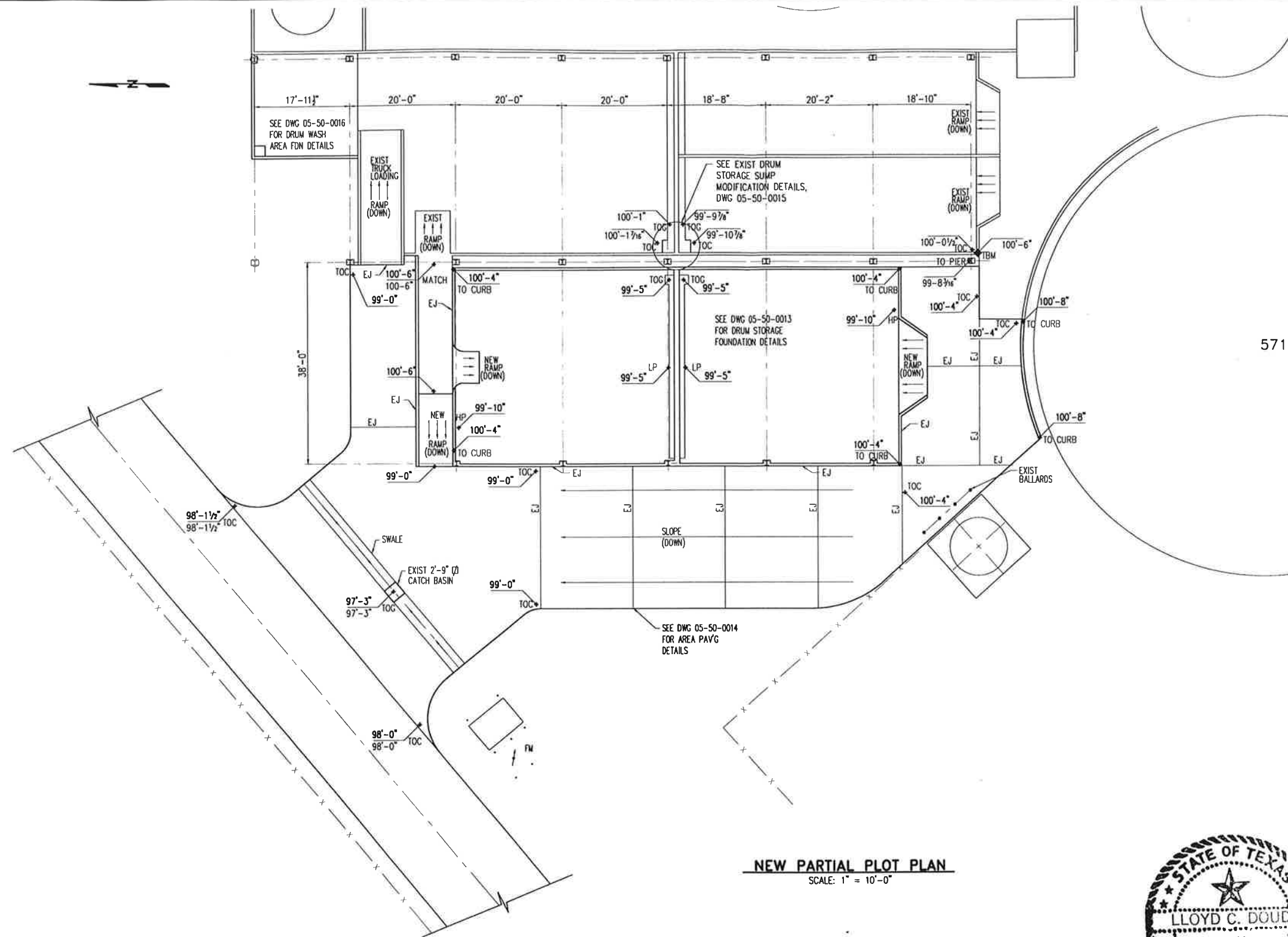


IMPROVEMENT AREA  
SEE DWG'S:  
01-50-0011  
01-50-0012  
01-50-0013  
01-50-0014  
01-50-0015  
01-50-0016



10-24-01

NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	DRAWING NUMBER	REFERENCE DRAWINGS	<div> <b>Vopak</b> INDUSTRIAL SERVICES </div>		2759 Battleground Road Deer Park, Texas 77536 (281) 604-6150		REPORTS FOR RCRA PART "B"			
A	ISSUED FOR REVIEW	2-01	TEH											KEY PLAN ~ 05-D-1			
0	ISSUED FOR CONSTRUCTION	4-01	TEH							ENGINEER	<b>H &amp; M DESIGN, INC.</b> 8602 SPENCER HWY. LA PORTE, TEXAS 77571	PH # (281) 930-8750 FAX # (281) 930-8711 E-MAIL hm@hmdesigninc.com		DRUM STORAGE EXPANSION			
										DRAWN BY: TEH	DATE NOV 28	PROJ. ENG.:		NOR #5			
										CHECKED BY: LH	DATE NOV 28	VOPAK ENG.:	SCALE: 1" = 80'	Sht. size: ACad File Name: Drawing Number: Rev.			
										H&M JOB #: 853-EM		ENGINEER JOB NO.		D	05-50-0010.DWG	05-50-0010	0



#### GENERAL CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL CONFORM TO THE JOB SPECIFICATIONS, ACI-318 LATEST EDITION.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
3. ALL REINFORCING BARS SHALL BE NEW, CLEAN, GRADE 60, BILLET-STEEL AS PER ASTM DESIGNATION A-615.
4. ALL REINFORCING BARS SHALL BE DETAILED AND PLACED AS PER ACI MANUALS 315 AND 318 LATEST EDITION.
5. ALL EXPOSED CONCRETE AND GROUT CORNERS AND EDGES SHALL BE CHAMFERED 3/4" UNLESS NOTED OTHERWISE.
6. FIELD PROBE AND LOCATE ALL UNDERGROUND PIPES, FOUNDATIONS, CONDUITS AND ANY OTHER OBSTRUCTIONS BEFORE DRILLING OR EXCAVATING AS REQUIRED.
7. ALL CONCRETE IN CSA D-1 AREAS 3 AND 4 TO BE SEALED WITH EPOXY NOVOLAC OR VINYL ESTER COATING (OR APPROVED EQUAL). ALL CONCRETE IN CSA D-1 AREAS 1 AND 2 TO BE SEALED WITH EPOXY OR BETTER.

#### SITE PREP NOTES:

1. EXCAVATE 2 FT MIN BELOW ALL NEW CONSTRUCTION
2. ALL FILL TO BE LOW PLASTICITY 60/40 SAND CLAY MIX PLACED IN 8" LIFTS AND COMPACTED TO 95% STD PROCTOR

571



#### LEGEND

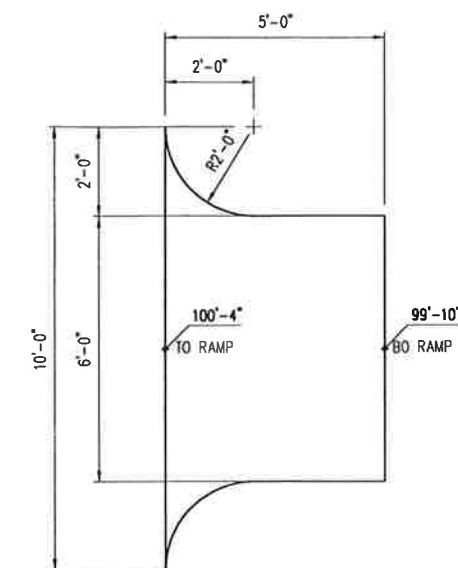
- xxx.xx - PROPOSED ELEV
- xxx.xx - EXIST ELEV
- TBM - TEMPORARY BENCHMARK
- TOC - TOP OF CONCRETE
- TOG - TOP OF GRATING
- HP - HIGH POINT
- LP - LOW POINT
- EJ - EXPANSION JOINT





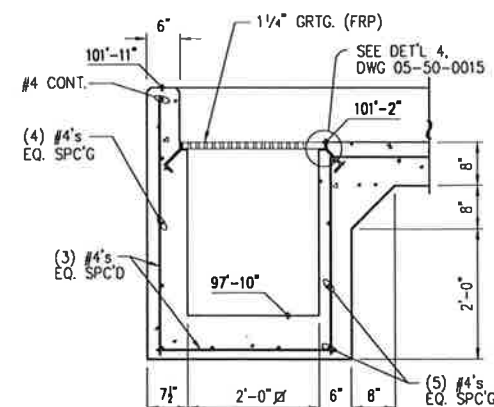
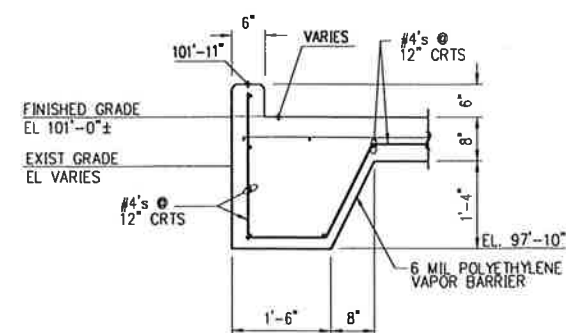
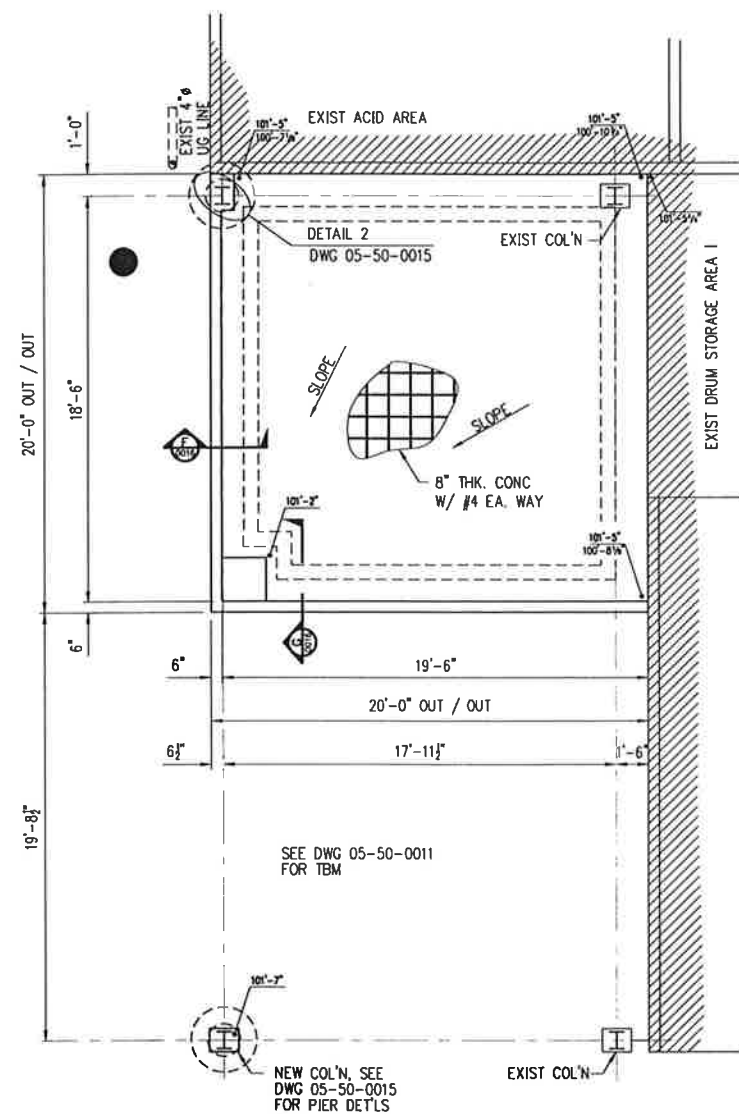
#### NEW PARTIAL PLOT PLAN

SCALE: 1" = 10'-0"

NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	DRAWING NUMBER	REFERENCE DRAWINGS	<div><div></div><div>Vopak INDUSTRIAL SERVICES</div></div> <div>2759 Bottleground Road Deer Park, Texas 77536 (281) 604-6150</div>				REPORTS FOR RCRA PART "B"			
A	ISSUED FOR REVIEW	2-01	TEH							<div><div></div><div>ENGINEER H &amp; M DESIGN, INC. 8602 SPENCER HWY. LA PORTE, TEXAS 77571</div></div> <div>PH # (281) 930-8750 FAX # (281) 930-8711 E-MAIL hmdesigninc.com</div>				NEW PARTIAL PLOT PLAN ~ 05-D-1			
O	ISSUED FOR CONSTRUCTION	4-01	TEH							<div>DRAWN BY: TEH    DATE 11-00    PROJ. ENG.: CHECKED BY:    VOPAK ENG.: PAM SMOLEN    SCALE: AS NOTED H&amp;M JOB #: 853-EM    ENGINEER JOB NO. 853-EM</div>				DRUM STORAGE EXPANSION			
										NOR#5							
										Sht. size: D    ACad File Name: 05-50-0011.DWG    Drawing Number: 05-50-0011    Rev. 0							



NO.		REVISONS		DATE		BY		DRAWING NUMBER		REFERENCE DRAWINGS		<div><div>Vopak INDUSTRIAL SERVICES</div></div> <div>2759 Battleground Road Deer Park, Texas 77536 (281) 604-6150</div>				REPORTS FOR RCRA PART "B"					
A		ISSUED FOR REVIEW		2-01		TEH				05-50-0015		MISC SECTIONS AND DETAILS		<div><div>ENGINEER</div><div><div>H &amp; M DESIGN, INC. 8602 SPENCER HWY. LA PORTE, TEXAS 77571</div></div><div>PH # (281) 930-8750 FAX # (281) 930-8711 E-MAIL hm@hmdesigninc.com</div></div>				NEW DRUM STORAGE FOUNDATION ~ 05-D-1			
D		ISSUED FOR CONSTRUCTION		4-01		TEH								DRUM STORAGE EXPANSION							
														NOR #5							
														Sht. size: ACad File Name: Drawing Number: Rev.							
														D 05-50-0013.DWG 05-50-0013 0							

[illegible]

### GROSS AREA

AREA IA, EXIST = 2040 FT<sup>2</sup>  
AREA IB, NEW = 385 FT<sup>2</sup>  
AREA IIA, EXIST = 1063 FT<sup>2</sup>  
AREA IIB, EXIST = 1063 FT<sup>2</sup>  
AREA III, NEW = 1510 FT<sup>2</sup>  
AREA IV, NEW = 1510 FT<sup>2</sup>

### GROSS CONTAINMENT

AREA IA, EXIST = 645 FT<sup>3</sup>  
AREA IB, NEW = 193 FT<sup>3</sup>  
AREA IIA, EXIST = 540 FT<sup>3</sup>  
AREA IIB, EXIST = 540 FT<sup>3</sup>  
AREA III, NEW = 1025 FT<sup>3</sup>  
AREA IV, NEW = 1031 FT<sup>3</sup>

$$V = A \cdot H$$

### AVAILABLE CONTAINMENT

GROSS CONTAINMENT LESS AREA FOR PALLETS:

AREA IA, EXIST = 451 FT<sup>3</sup> = 3374 GAL.  
(62 PALLETS @ 3.13 FT<sup>3</sup> = 194 FT<sup>3</sup>)

AREA IB, NEW = 193 FT<sup>3</sup> = 1444 GAL.  
(NO STORAGE)

AREA IIA, EXIST = 424 FT<sup>3</sup> = 3172 GAL.  
(37 PALLETS @ 3.13 FT<sup>3</sup> = 116 FT<sup>3</sup>)

AREA IIB, EXIST = 424 FT<sup>3</sup> = 3172 GAL.  
(37 PALLETS @ 3.13 FT<sup>3</sup> = 116 FT<sup>3</sup>)

AREA III, NEW = 875 FT<sup>3</sup> = 6545 GAL.  
(48 PALLETS @ 3.13 FT<sup>3</sup> = 150 FT<sup>3</sup>)

AREA IV, NEW = 881 FT<sup>3</sup> = 6590 GAL.  
(48 PALLETS @ 3.13 FT<sup>3</sup> = 150 FT<sup>3</sup>)

### REQUIRED CONTAINMENT

10% OF TOTAL STORAGE CAPACITY

AREA IA, EXIST = 547 FT<sup>3</sup> = 4092 GAL

AREA IB, NEW = 0 FT<sup>3</sup> = 0 GAL

AREA IIA, EXIST = 326 FT<sup>3</sup> = 2442 GAL

AREA IIB, EXIST = 326 FT<sup>3</sup> = 2442 GAL

AREA III, NEW = 423 FT<sup>3</sup> = 3168 GAL

AREA IV, NEW = 423 FT<sup>3</sup> = 3168 GAL

### MAXIMUM RAINFALL

(25 YEAR, 24 HOUR RAINFALL = 9.9")

AREA IA, EXIST = 207 FT<sup>3</sup> = 1549 GAL

AREA IB, NEW = 52 FT<sup>3</sup> = 389 GAL

AREA IIA, EXIST = 242 FT<sup>3</sup> = 1810 GAL

AREA IIB, EXIST = 81 FT<sup>3</sup> = 609 GAL

AREA III, NEW = 0 FT<sup>3</sup> = 0 GAL

AREA IV, NEW = 172 FT<sup>3</sup> = 1287 GAL

### TOTAL CONTAINMENT REQUIRED

AREA IA, EXIST = 754 FT<sup>3</sup> = 5641 GAL

AREA IB, NEW = 52 FT<sup>3</sup> = 389 GAL

AREA IIA, EXIST = 568 FT<sup>3</sup> = 4252 GAL

AREA IIB, EXIST = 407 FT<sup>3</sup> = 3051 GAL

AREA III, NEW = 423 FT<sup>3</sup> = 3168 GAL

AREA IV, NEW = 595 FT<sup>3</sup> = 4455 GAL

-ADDITIONAL CONTAINMENT OF 303 FT<sup>3</sup> (2267 GAL.) REQUIRED

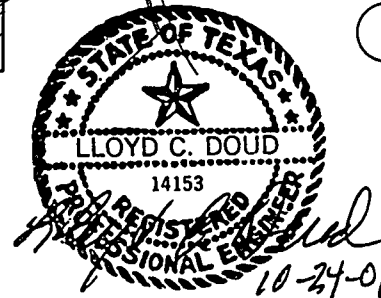
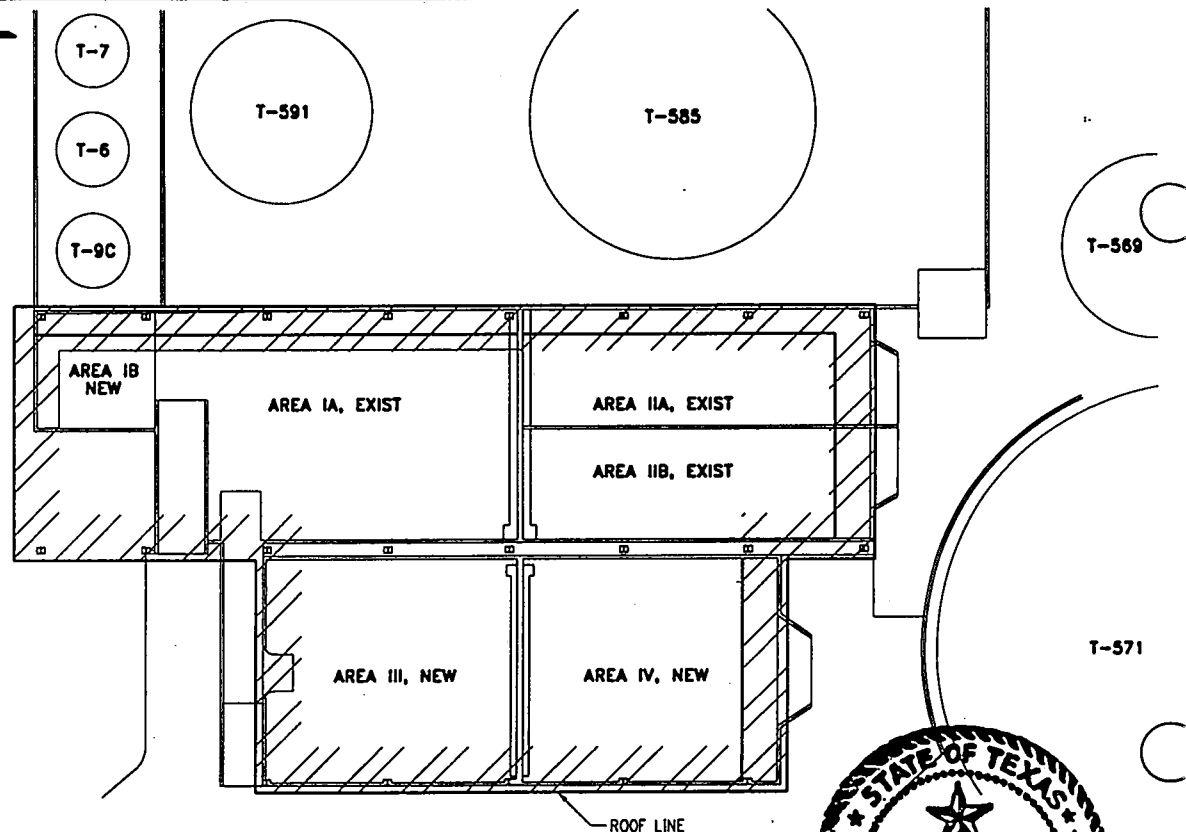
-EXCESS CONTAINMENT OF 141 FT<sup>3</sup> (1055 GAL.)

-ADDITIONAL CONTAINMENT OF 144 FT<sup>3</sup> (1080 GAL.) REQUIRED

-EXCESS CONTAINMENT OF 16 FT<sup>3</sup> (121 GAL.)

-EXCESS CONTAINMENT OF 451 FT<sup>3</sup> (3377 GAL.)

-EXCESS CONTAINMENT OF 285 FT<sup>3</sup> (2135 GAL.)



No.	Revision	Date	By	App.	Name:	Date:
					Drawn	TEH 2-27-01
					Approved by	P.SMOLEN
					Engineer/Design Co.	HEM DESIGN, INC. 8803 SPENCER HWY. LA PORTE, TEXAS 77571 PH / (281) 636-6750
0	ISSUED FOR CONSTRUCTION	APRIL 2001	TEH		CAD Name	05-10-0015.DWG
A	ISSUED FOR REVIEW	MAY 2001	TEH		Scale:	1" = 20.0'

**Vopak**  
INDUSTRIAL SERVICES

2759 Battleground Road  
Deer Park, Texas 77536  
(281) 604-6150

REPORTS FOR RCRA PART "B"					
CONTAINMENT CALCULATIONS ~ 05-D-1					
DRUM STORAGE EXPANSION					
NOR #5					
Sheet Size:	Location:	Job #:	Drawing Number:	Rev. #	
B		853-EM	05-10-0015	0	

**H&M Design, Inc.**

**DESIGN REPORT FOR DRUM PAD 05-D-1**

**CONTAINER STORAGE AREA**

The Drum Pad is a container storage area designed to accept a variety of waste streams, in drums and containers, (Attachment II) from both sister companies and selected commercial customers for holding, pretreating and bulking. Prior to receipt of the drums or containers, it will be determined if the container storage area has available capacity and if the storage area is compatible with the waste stream.

In accordance with the Plant Work Order, the drums or containers are stored in the correct area of the Drum Pad. Flammables and combustibles cannot be stored in Area 4. The drums or containers can be heated with steam if required. The drums or containers can also be rinsed in the drum Pad Area.

In an event where there is a leak from a container, the leak will flow into diked secondary containment. This diked containment is an area that has a concrete floor and inside curbs that are sealed with Epoxy, Epoxy Novalac, Vinyl Ester, or equivalent coating. The coated curbs protect against any run-on liquids, as well as seepage and runoffs. (See Attachment I).



**CONTAINMENT SYSTEM DESIGN CRITERIA**

The key regulatory requirements for secondary containment system are:

1. Secondary containment system must be designed, installed and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the drum system.
2. Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

To meet these requirements the rules further specify that the system must be:

3. Constructed of materials that are compatible with, and resistant to the waste stored, and have sufficient structural strength to prevent failure due to pressure gradients, climatic conditions and stresses of daily operation.
4. Have an adequate foundation for support, resistance to pressure gradients, and capable of preventing failure due to settlement, compression or uplift.
5. Provided with a leak detection system to detect leaks within 24 hours.
6. Designed for removal of any accumulated liquids from leaks, spills, or precipitation.
7. The regulations further state that for drums the secondary containment must include one of the following.
  - A. A liner external to the drum.
  - B. A vault
  - C. A double walled drum.
  - D. An Equivalent device approved by the Regional Administrator or his designate (TNRCC).
8. For vaults & external liners the following criteria must also be followed:
  - A. Drum secondary containment must also be designed to contain the volume of the largest waste drum in the containment area plus the rainfall from a 25 year, 24 hour rainfall event (approximately 9.9 inches) if it can enter the containment area.
  - B. Must be free of cracks or gaps.



- C. Designed and installed to surround the drum completely, and to cover all surrounding earth likely to come in contact with the waste released from the drum.
- 9. All ancillary piping, valves, sight glasses, pumps, etc. should be located within the concrete containment area to provide containment for these components. Piping or the other components located outside this containment area will require individual containment as listed below.
  - A. Above ground piping with welded flanges and joints is considered satisfactory for secondary containment if visually inspected on a daily basis.

For secondary containment coating type and technical data see report 05-200-0001.

**ATTACHMENT II**  
**LIST OF AUTHORIZED WASTES**

Authorized wastes for CSA 05-D-1 per Permit No. HW-50025:

Waste	Source	TNRCC Waste Classification	Hazard Code
Railcar Washwater	Generated	H, 1, 2	I,T,C,H,E,R
Railcar Heel Solids - Organic	Generated	H, 1, 2	I,T,C,H,E,R
Railcar Heel Liquids - Organic	Generated	H, 1, 2	I,T,C,H,E,R
Spent Fuels	Generated	H, 1, 2	I,T,C,H,E,R
Railcar Heel Solids - Inorganic	Generated	H, 1, 2	I,T,C,H,E,R
Railcar Heel Liquids - Inorganic	Generated	H, 1, 2	I,T,C,H,E,R
Ignitable Solvent	Generated	H, 1, 2	I,T,C,H,E,R
Acidic Aqueous Waste	Generated	H, 1, 2	I,T,C,H,E,R
Aqueous Waste - Low Solvents	Generated	H, 1, 2	I,T,C,H,E,R
Aqueous Waste - High Dissolved Solids	Generated	H, 1, 2	I,T,C,H,E,R
Mercury Contaminated Waste	Generated	H, 1, 2	I,T,C,H,E,R
Caustic Aqueous Waste	Generated	H, 1, 2	I,T,C,H,E,R
Organic Sludge	Generated	H, 1, 2	I,T,C,H,E,R
Inorganic Sludge	Generated	H, 1, 2	I,T,C,H,E,R
Liquid Organic Wastes	Generated	H, 1, 2	I,T,C,H,E,R
Inorganic Salt	Generated	H, 1, 2	I,T,C,H,E,R
Washwaters with Low Organics	Generated	H, 1, 2	I,T,C,H,E,R
Contaminated Stormwater	Generated	H, 1, 2	I,T,C,H,E,R
Inorganic Ignitable or Acidic Aqueous Waste	Generated	H, 1, 2	I,T,C,H,E,R
Organic Ignitable or Acidic Aqueous Waste	Generated	H, 1, 2	I,T,C,H,E,R
Solids Contaminated with Hydrocarbons	Generated	H, 1, 2	I,T,C,H,E,R
Pesticide Waste	Received	H, 1, 2	I,T,C,H,E,R
Metallic Waste	Received	H, 1, 2	I,T,C,H,E,R
Caustic Waste	Received	H, 1, 2	I,T,C,H,E,R
Acidic Waste (including Spent Acid)	Received	H, 1, 2	I,T,C,H,E,R
Neutralized Spent Acids	Received	H, 1, 2	I,T,C,H,E,R
Organic Waste	Received	H, 1, 2	I,T,C,H,E,R
Inorganic Waste	Received	H, 1, 2	I,T,C,H,E,R
Waste Oils and Solvents	Received	H, 1, 2	I,T,C,H,E,R
Aqueous Waste	Received	H, 1, 2	I,T,C,H,E,R
Washwater (including Railcar, Tank Truck, and Tanks washwater)	Received	H, 1, 2	I,T,C,H,E,R
Contaminated Stormwater	Received	H, 1, 2	I,T,C,H,E,R
Sludges	Received	H, 1, 2	I,T,C,H,E,R
Off-Spec Products Discarded as Waste	Received	H, 1, 2	I,T,C,H,E,R
Lab Packs	Received	H, 1, 2	I,T,C,H,E,R
Solids Contaminated with Hydrocarbons	Received	H, 1, 2	I,T,C,H,E,R
PCB Waste	Received	1, 2	

**\*\*PCB Wastes are defined herein as solid wastes contaminated with polychlorinated biphenyls regulated by the Toxic Substance Control Act in Title 40 of the code of Federal Regulations (CFR) Part 761.**

**ATTACHMENT III**  
**INSPECTION FORMS**

**H&M Design, Inc.**  
**Containment System Design Assessment**

The design assessment for the secondary containment system for Drum Pad 05-D-1 (container storage area) was completed on May 15, 2001. This system will be inspected and approved upon completion by an independent professional engineer registered in the State of Texas.

A reinforced curbed area provides Secondary Containment for the containers. This area also provides secondary containment for all ancillary equipment located at the drum site. This curbed area serves as an external liner between the drum system and the ground. The lined concrete surfaces are compatible with the wastes stored and will prevent migration through the surface to the ground. All seams, joints, and cracks are caulked and sealed with an epoxy type joint material that is compatible with the waste materials stored in these containers.

The containment area is divided into (5) sections for storage (Areas IA, IIA, IIB, III, & IV), and (1) section (Area IB) for drum washing. Each section is covered with a roof for partial protection from rainfall. The areas are sloped so that any spilled waste or rainwater enters the trench and/or sump. The trench and sump are also constructed of reinforced concrete with an epoxy liner. The containment requirement for each area has been calculated using 10% of the maximum container storage capability plus additional storage for a calculated percentage of a 25 year, 24 hour rainfall event. (Attachment I)

Areas IA & IIA fall short of their containment requirement by approximately 3,347 gallons combined, and will pump all additional accumulated wastes and or rainfall into a compatible RCRA approved tank within the system. Areas IB, IIB, III, & IV have excess containment capacity. (See Attachment I, Drawing 05-10-0015)

The reinforced concrete structure provides sufficient strength for expected pressure gradients, climatic conditions, and stress of daily operations.

Any leaks or spills into the containment area will be visible immediately, so leak detection is provided by continuous visual inspections by operations as well as daily close-up walk thru inspections. Unit operators, as required, will document any leak, spill, or other concerns.



Larry Hogan  
H&M Design, Inc.

**H&M DESIGN, INC.**

**HAZARDOUS WASTE STORAGE ASSESSMENTS**

**EXTERNAL INSPECTION CHECKLIST**

CSA No. \_\_\_\_\_

\_\_\_\_\_

Condition of containers

\_\_\_\_\_

Cracks and leaks in piping

\_\_\_\_\_

Secondary Containment Coating

\_\_\_\_\_

Containers stored in correct location

\_\_\_\_\_

Corrosion pits in containers or coating

\_\_\_\_\_

Hammer testing

\_\_\_\_\_

Valve stem and flange connections

\_\_\_\_\_

Open ended lines

\_\_\_\_\_

Pump seal

\_\_\_\_\_

Conformance with Application Codes

\_\_\_\_\_

Any modifications since last assessment

Comments:

\_\_\_\_\_  
Signature

## **APPENDIX V.C**

### **TANKS AND TANK SYSTEMS**



**TABLE V.C**  
**TANKS AND TANK SYSTEMS**

**Table V.C. - Tanks and Tank Systems**

Permit Unit No.	Tank	N.O.R. No.	Storage and/or Processing	Waste Nos. <sup>1</sup>	Rated Capacity	Dimensions	Containment Volume (including rainfall for unenclosed areas)	Unit will manage Ignitable, Reactive, or Incompatible waste (state all that apply)	Unit Status
002	05-T-1B	022	Storage and Processing	All	50,000 gallons	D = 20 ft, H = 23 ft	328,753 gallons	Ignitable, and Reactive	Active
003	05-T-43	023	Storage and Processing	All	15,994 gallons	D = 12 ft, H = 20 ft	328,753 gallons	Ignitable, and Reactive	Active
004	05-T-44	024	Storage and Processing	All	2,632 gallons	D = 8 ft 1 in., H = 7 ft	328,753 gallons	Ignitable, and Reactive	Active
005	05-T-3	025	Storage	All	20,000 gallons	D = 12 ft., H = 24 ft	328,753 gallons	Ignitable, and Reactive	Active
007	05-T-4B	027	Storage and Processing	All	21,000 gallons	D = 15 ft, H = 16 ft	328,753 gallons	Ignitable, and Reactive	Active
009	05-T-4D	029	Storage and Processing	All	4,625 gallons	D = 6.67 ft, L = 16.92 ft	65,944 gallons	Ignitable, and Reactive	Active
010	05-T-4E	030	Storage and Processing	All	4,625 gallons	D = 6.67 ft, L = 16.92 ft	65,944 gallons	Ignitable, and Reactive	Active
011	05-T-5	031	Storage and Processing	All	200,000 gallons	D = 33 ft, H = 32 ft	328,753 gallons	Ignitable, and Reactive	Active
012	05-T-6	032	Storage	All	21,150 gallons	D = 12 ft, H = 25 ft	952,818 gallons	Ignitable, and Reactive	Active

1. from Table IV.B, first column

**Table V.C. - Tanks and Tank Systems**

Permit Unit No.	Tank	N.O.R. No.	Storage and/or Processing	Waste Nos. <sup>1</sup>	Rated Capacity	Dimensions	Containment Volume (including rainfall for unenclosed areas)	Unit will manage Ignitable, Reactive, or Incompatible waste (state all that apply)	Unit Status
013	05-T-7	033	Storage	All	20,000 gallons	D = 12 ft, H = 24 ft	952,818 gallons	Ignitable, and Reactive	Active
014	05-T-8	034	Storage and Processing	All	20,305 gallons	D = 12 ft, H = 24 ft	328,753 gallons	Ignitable, and Reactive	Active
015	05-T-9A	035	Storage and Processing	All	24,000 gallons	D = 16 ft, H = 16 ft	328,753 gallons	Ignitable, and Reactive	Active
016	05-T-9B	036	Storage and Processing	All	21,000 gallons	D = 15 ft, H = 16 ft	328,753 gallons	Ignitable, and Reactive	Active
018	05-T-21	038	Storage and Processing	All	19,990 gallons	D = 12 ft, H = 24 ft	65,944 gallons	Ignitable, and Reactive	Active
019	05-T-22	039	Storage and Processing	All	19,990 gallons	D = 12 ft, H = 24 ft	65,944 gallons	Ignitable, and Reactive	Active
020	05-T-23	040	Storage and Processing	All	20,000 gallons	D = 12 ft, H = 24 ft	328,753 gallons	Ignitable, and Reactive	Not Yet Built
021	05-T-24	041	Storage and Processing	All	20,000 gallons	D = 12 ft, H = 24 ft	328,753 gallons	Ignitable, and Reactive	Not Yet Built
022	05-T-25	042	Storage and Processing	All	20,000 gallons	D = 12 ft, H = 24 ft	328,753 gallons	Ignitable, and Reactive	Not Yet Built

1. from Table IV.B, first column

**Table V.C. - Tanks and Tank Systems**

Permit Unit No.	Tank	N.O.R. No.	Storage and/or Processing	Waste Nos. <sup>1</sup>	Rated Capacity	Dimensions	Containment Volume (including rainfall for unenclosed areas)	Unit will manage Ignitable, Reactive, or Incompatible waste (state all that apply)	Unit Status
029	05-T-563	049	Storage and Processing	All	504,000 gallons	D = 46.5 ft, H = 40 ft	952,818 gallons	Ignitable, and Reactive	Active
030	05-T-567	050	Storage and Processing	All	504,000 gallons	D = 46.5 ft, H = 40 ft	952,818 gallons	Ignitable, and Reactive	Inactive
032	05-T-583	052	Storage and Processing	All	504,000 gallons	D = 46.5 ft, H = 40 ft	952,818 gallons	Ignitable, and Reactive	Active
036	05-T-589	056	Storage and Processing	All	504,000 gallons	D = 46.5 ft, H = 40 ft	952,818 gallons	Ignitable, and Reactive	Active
037	05-T-590	057	Storage and Processing	All	504,000 gallons	D = 46.5 ft, H = 40 ft	952,818 gallons	Ignitable, and Reactive	Active
038	05-T-591	058	Storage and Processing	All	126,900 gallons	D = 30 ft, H = 24 ft	952,818 gallons	Ignitable, and Reactive	Active
039	05-C-1	059	Processing	All	74,000 gallons	D = 30 ft, H = 14 ft 7 in.	328,753 gallons	Ignitable, and Reactive	Active
040	05-C-2	060	Processing	All	1,175 gallons	D = 5 ft, H = 8 ft	328,753 gallons	Ignitable, and Reactive	Active
041	05-C-3	061	Processing	All	2,277 gallons	D = 5 ft, H = 15 ft 4 in.	328,753 gallons	Ignitable, and Reactive	Active

1. from Table IV.B, first column

**Table V.C. - Tanks and Tank Systems**

Permit Unit No.	Tank	N.O.R. No.	Storage and/or Processing	Waste Nos. <sup>1</sup>	Rated Capacity	Dimensions	Containment Volume (including rainfall for unenclosed areas)	Unit will manage Ignitable, Reactive, or Incompatible waste (state all that apply)	Unit Status
042	05-C-4	062	Processing	All	288 gallons	D = 3.5 ft, H = 4 ft	328,753 gallons	Ignitable, and Reactive	Active
043	05-T-51	063	Storage	All	11,700 gallons	D = 8 ft, L = 30 ft	71,967 gallons	Ignitable, and Reactive	Active
044	05-T-52	064	Storage	All	12,000 gallons	D = 8 ft, L = 30.75 ft	71,967 gallons	Ignitable, and Reactive	Active
045	05-T-53	065	Storage	All	10,100 gallons	D = 7 ft 4 in., L = 30 ft 10 in.	71,967 gallons	Ignitable, and Reactive	Active
046	05-T-54	066	Storage	All	10,400 gallons	D = 7 ft 4 in., L = 31.75 ft	71,967 gallons	Ignitable, and Reactive	Active
047	05-T-55	067	Storage	All	10,400 gallons	D = 7 ft 4 in., L = 31.75 ft	71,967 gallons	Ignitable, and Reactive	Active
051	05-F-1A	078	Processing	All	958 gallons	D = 5 ft, L = 5 ft 9 in.	328,753 gallons	Ignitable, and Reactive	Active
052	05-F-1B	079	Processing	All	958 gallons	D = 5 ft., L = 5 ft 9 in.	328,753 gallons	Ignitable, and Reactive	Active
053	05-F-2	069	Processing	All	24 gallons	D = 1 ft 3/4 in., H = 4 ft	328,753 gallons	Ignitable, and Reactive	Active

1. from Table IV.B, first column

**Table V.C. - Tanks and Tank Systems**

Permit Unit No.	Tank	N.O.R. No.	Storage and/or Processing	Waste Nos. <sup>1</sup>	Rated Capacity	Dimensions	Containment Volume (including rainfall for unenclosed areas)	Unit will manage Ignitable, Reactive, or Incompatible waste (state all that apply)	Unit Status
054	05-F-3	070	Processing	All	24 gallons	D = 1 ft 3/4 in., H = 4 ft	328,753 gallons	Ignitable, and Reactive	Active
055	05-F-4	080	Processing	All	400 gallons	L = 13.68 ft, W = 4.42 ft, H = 6.9 ft	746 gallons	Ignitable, and Reactive	Active
057	05-B-1	017	Storage	All	7,687 gallons	L = 15.5 ft, W = 7.5 ft, D = 8.83 ft Plus Sump L = 1.5 ft, W = 1.5 ft, D = 5 ft	23,034 gallons	Ignitable, and Reactive	Active
058	05-B-2	018	Storage	All	7,687 gallons	L = 15.5 ft, W = 7.5 ft, D = 8.83 ft Plus Sump L = 1.5 ft, W = 1.5 ft, D = 5 ft	23,034 gallons	Ignitable, and Reactive	Active
063	05-T-574	081	Storage and Processing	All	20,305 gallons	D = 12 ft, H = 24 ft	27,684 gallons	Ignitable, and Reactive	Active
064	05-T-575	107	Storage and Processing	All	20,305 gallons	D = 12 ft, H = 24 ft	27,684 gallons	Ignitable, and Reactive	Active
065	05-T-39	108	Storage and Processing	All	20,305 gallons	D = 12 ft, H = 24 ft	58,455 gallons	Ignitable, and Reactive	Not Yet Built

1. from Table IV.B, first column

**Table V.C. - Tanks and Tank Systems**

Permit Unit No.	Tank	N.O.R. No.	Storage and/or Processing	Waste Nos. <sup>1</sup>	Rated Capacity	Dimensions	Containment Volume (including rainfall for unenclosed areas)	Unit will manage Ignitable, Reactive, or Incompatible waste (state all that apply)	Unit Status
066	05-T-40	109	Storage and Processing	All	20,305 gallons	D = 12 ft, H = 24 ft	58,455 gallons	Ignitable, and Reactive	Not Yet Built
067	05-T-41	110	Storage and Processing	All	20,305 gallons	D = 12 ft, H = 24 ft	58,455 gallons	Ignitable, and Reactive	Not Yet Built
068	05-T-42	111	Storage and Processing	All	20,305 gallons	D = 12 ft, H = 24 ft	58,455 gallons	Ignitable, and Reactive	Not Yet Built
074	05-T-48	112	Storage and Processing	All	1,190 gallons	D = 6 ft, H = 6.5 ft	328,753 gallons	Ignitable, and Reactive	Active
075	05-T-49	113	Storage and Processing	All	2,490 gallons	D = 8 ft, H = 7.5 ft	328,753 gallons	Ignitable, and Reactive	Active
087	05-V-2	117	Processing	All	37 gallons	D = 21 in., L = 8.4 ft	328,753 gallons	Ignitable, and Reactive	Active

1. from Table IV.B, first column

## **APPENDIX V.C.1**

### **SECONDARY CONTAINMENT CALCULATIONS**



# **05-F-4 AREA** **SECONDARY CONTAINMENT CALCULATIONS**

Largest Tank Capacity = 400 gallons  
Additional Bulk Storage Contents = None.

Containment <sup>(1)</sup> - Concrete Wall		Dimensions		Unit
Containment Length =			24.67	feet
Containment Width =			10.67	feet
Containment Height =			0.25	feet
Containment Capacity =			65.78	feet <sup>3</sup>
Containment Sloped Length =			24.67	feet
Containment Sloped Width =			10.67	feet
Containment Sloped Depth =			0.25	feet
Containment Capacity =			32.89	feet <sup>3</sup>
Underground Sump Area =			2.22	feet <sup>2</sup>
Underground Sump Depth =			0.50	feet
Containment Capacity =			1.11	feet <sup>3</sup>
Total Containment Capacity =			99.78	feet <sup>3</sup>
Total Containment Capacity =			746	gallon
Displacement <sup>(2)</sup>				
None.				
Freeboard Calculation: Based on 25-Year, 24-Hour Rain Event <sup>(2)</sup>				
25 Year, 24-Hour Rain event =			1.03	feet
Total Containment Area =			263	feet <sup>2</sup>
Estimated Required Freeboard =			270	feet <sup>3</sup>
			2,017	gallon
Summary Calculations: Based on 25-Year, 24-Hour Rain Event				
Containment Capacity			746	gallon
Total Displacement			0	gallon
Available Containment Capacity			746	gallon
Estimated Required Freeboard			2,017	gallon
Net Containment Capacity <sup>(3)</sup>			-1,271	gallon
Size of 05-F-4			400	gallon
Additional Capacity <sup>(4)</sup>			-1,671	gallon
Stormwater collection system does have additional capacity to collect a release and contain it onsite <sup>(5)</sup>				
Additional Secondary Containment Capacity <sup>(6)</sup>			41,108	gallon
Additional Net Containment Capacity			39,437	gallon



(1) Field data was collected on July 3<sup>rd</sup> 2024.

Measurements were collected from the inside one wall to the inside of the next wall.

(2) Precipitation data from NOAA Atlas 14 [https://hdsc.nws.noaa.gov/hdsc/pfds/pfds\\_map\\_cont.html](https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html).

NOAA released the precipitation data in September 2018, and the data was obtained on July 18, 2024.

(3) Net Containment Capacity = Containment Capacity - Total Displacement - Required Freeboard.

(4) Additional Capacity is calculated as Net Containment Capacity - Capacity of Largest Container.

(5) The Stormwater Collection System has sufficient capacity to control a release from 05-F-4 and to pump it to the 05-T-583 or 05-T-589 for storage during a 25-year, 24-hour rain event.

(6) Additional Secondary Containment includes EOTS.

**Secondary Containment has sufficient capacity to contain contents of the largest storage tank and precipitation based on a 25-year, 24-hour rain event (12.3 inches).**

### 500 SERIES STORAGE AREA SECONDARY CONTAINMENT CALCULATIONS

Largest Tank Capacity (05-T-563) = 504,000 gallons

Additional Bulk Storage Contents = One 21,150-gallon storage tank (05-T-6); One 20,000-gallon storage tank (05-T-7); One 7,520-gallon acid tank; four 504,000-gallon storage tanks (05-T-567, 05-T-583, 05-T-589, and 05-T-590) and one 126,900-gallon storage tank (05-T-591) used to store hazardous waste. Two 504,000-gallon storage tanks are existing but closed (05-T-584 and 05-T-585).

Containment <sup>(1)</sup> - Concrete Wall		Dimensions	Unit
Containment Length 1 =		196.00	feet
Containment Width 1 =		155.00	feet
Containment Height 1 =		4.00	feet
Containment 1 Capacity =		121,520.00	feet <sup>3</sup>
Containment Length 2 =		162.00	feet
Containment Width 2 =		78.00	feet
Containment Height 2 =		4.00	feet
Containment 2 Capacity =		50,544.00	feet <sup>3</sup>
Total Containment Capacity =		172,064	feet <sup>3</sup>
		1,287,128	gallon
Displacement <sup>(2)</sup>			
Volume of Tank 05-T-6 and 05-T-7			
Diameter =	12.00		feet
Height =	4.00		feet
Displacement By Each Tank 05-T-6 and 05-T-7	452.39		feet <sup>3</sup>
Displacement By Tanks 05-T-6 and 05-T-7	904.78		feet <sup>3</sup>
Volume of Acid Tank			
Diameter =	8.00		feet
Height =	4.00		feet
Displacement By Acid Tank	201.06		feet <sup>3</sup>
Volume of Tanks 05-T-567, 583, 589 and 590			
Diameter =	46.50		feet
Height =	4.00		feet
Displacement By Each Tank	6,792.91		feet <sup>3</sup>
Displacement By Tanks 567, 583, 589, and 590	27,171.63		feet <sup>3</sup>
Volume of Tanks 05-T-584 and 585			
Diameter =	46.50		feet
Height =	4.00		feet
Displacement By Each Tank =	6,792.91		feet <sup>3</sup>
Displacement By Tanks 584 and 585	13,585.82		feet <sup>3</sup>
Volume of Tank 05-T-591			
Diameter =	30.00		feet
Height =	4.00		feet
Displacement By 05-T-591 =	2,827.43		feet <sup>3</sup>
Total Displacement =	44,690.73		feet <sup>3</sup>
	334,310		gallon
Freeboard Calculation: Based on 25-Year, 24-Hour Rain Event <sup>(2)</sup>			
25 Year, 24-Hour Rain event =	1.03		feet
Total Containment Area =	43,016		feet <sup>2</sup>
Estimated Required Freeboard =	44,091		feet <sup>3</sup>
	329,827		gallon
Summary Calculations: Based on 25-Year, 24-Hour Rain Event			
Containment Capacity	1,287,128		gallon
Total Displacement	334,310		gallon
Available Containment Capacity	952,818		gallon
Estimated Required Freeboard	329,827		gallon
Net Containment Capacity <sup>(3)</sup>	622,992		gallon
Size of Tank 05-T-563	504,000		gallon
Additional Capacity <sup>(4)</sup>	118,992		gallon

(1) Field data was collected on July 3<sup>rd</sup> 2024.

Measurements were collected from the inside one wall to the inside of the next wall.

(2) Precipitation data from NOAA Atlas 14 [https://hdsc.nws.noaa.gov/hdsc/pfds/pfds\\_map\\_cont.html](https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html).

NOAA released the precipitation data in September 2018, and the data was obtained on July 18, 2024.

(3) Net Containment Capacity = Containment Capacity - Total Displacement - Required Freeboard.

(4) Additional Capacity is calculated as Net Containment Capacity - Capacity of Largest Container.

Secondary Containment has sufficient capacity to contain contents of the largest storage tank and precipitation based on a 25-year, 24-hour rain event (12.3 inches).





### DEEPWELL INJECTION AREA SECONDARY CONTAINMENT CALCULATIONS

Largest Tank Capacity (05-T-5) = 200,000 gallons

Additional Bulk Storage Contents = One 50,000-gallon storage tank (05-T-1B) ; One 15,994-gallon storage tank (05-T-43); One 2,632-gallon storage tank (05-T-44); One 20,000-gallon storage tank (05-T-3); One 21,000-gallon storage tank (05-T-4B); One 20,305-gallon storage tank (05-T-8); One 24,000-gallon storage tank (05-T-9A); One 21,000-gallon storage tank (05-T-9B); One 74,000-gallon clarifier tank (05-C-1); One 1,175-gallon clarifier tank (05-C-2); One 2,277-gallon clarifier tank (05-C-3); One 288-gallon clarifier tank (05-C-4); Two 958-gallon filters (05-F-1A and 05-F-1B); Two 24-gallon Cartridge Filters (05-F-2 and 05-F-3); One 1,190-gallon storage tank (05-T-48) and One 2,490-gallon storage tank (05-T-49) used to store hazardous waste. Several others are closed (e.g., 05-T-1A, and 05-T-4A).

Containment <sup>(1)</sup> - Concrete Wall		Dimensions		Unit
Containment Length 1 =		99.00		feet
Containment Width 1 =		85.67		feet
Containment Height 1 =		3.75		feet
Containment 1 Capacity =		31,803.75		feet <sup>3</sup>
Containment Length 2 =		75.67		feet
Containment Width 2 =		12.50		feet
Containment Height 2 =		3.75		feet
Containment 2 Capacity =		3,546.88		feet <sup>3</sup>
Containment Length 3 =		49.50		feet
Containment Width 3 =		33.50		feet
Containment Height 3 =		3.75		feet
Containment 3 Capacity =		6,218.44		feet <sup>3</sup>
Containment Length 4 =		60.17		feet
Containment Width 4 =		35.83		feet
Containment Height 4 =		3.75		feet
Containment 4 Capacity =		8,084.90		feet <sup>3</sup>
Containment Length 5 =		64.89		feet
Containment Width 5 =		42.34		feet
Containment Height 5 =		3.75		feet
Containment 5 Capacity =		5,150.97		feet <sup>3</sup>
Total Containment Capacity =		54,805		feet <sup>3</sup>
		409,969		gallon
Displacement <sup>(2)</sup>				
Volume of Tank 05-T-8				
Diameter =		12.00		feet
Height =		3.75		feet
Displacement By Tank 05-T-8		424.12		feet <sup>3</sup>
Volume of Tank 05-T-48				
Diameter =		6.20		feet
Height =		3.75		feet
Displacement By Tank 05-T-48		113.22		feet <sup>3</sup>
Volume of Tank 05-T-49				
Diameter =		8.00		feet
Height =		3.75		feet
Displacement By Tank 05-T-49		188.50		feet <sup>3</sup>
Volume of Tank 05-T-1A				
Diameter =		19.00		feet
Height =		3.75		feet
Displacement By Tank 05-T-1A		1,063.23		feet <sup>3</sup>
Volume of Tank 05-T-1B				
Diameter =		20.00		feet
Height =		3.75		feet
Displacement By Tank 05-T-1B		1,178.10		feet <sup>3</sup>
Volume of Tank 05-T-9A				
Diameter =		16.00		feet
Height =		3.75		feet
Displacement By Tank 05-T-9A		753.98		feet <sup>3</sup>
Volume of Tank 05-T-9B				
Diameter =		15.00		feet
Height =		3.75		feet
Displacement By Tank 05-T-9B		662.68		feet <sup>3</sup>



Volume of Tank 05-T-4A			
Diameter =	15.00	feet	
Height =	3.75	feet	
Displacement By Tank 05-T-4A	662.68	feet <sup>3</sup>	
Volume of Tank 05-T-4B			
Diameter =	15.00	feet	
Height =	3.75	feet	
Displacement By Tank 05-T-4B	662.68	feet <sup>3</sup>	
Volume of Tank 05-T-3			
Diameter =	12.00	feet	
Height =	3.75	feet	
Displacement By Tank 05-T-3	424.12	feet <sup>3</sup>	
Volume of Tank 05-T-43			
Diameter =	12.00	feet	
Height =	3.75	feet	
Displacement By Tank 05-T-43	424.12	feet <sup>3</sup>	
Volume of Tank 05-T-44			
Diameter =	8.10	feet	
Height =	3.75	feet	
Displacement By Tank 05-T-44	193.24	feet <sup>3</sup>	
Volume of Tank 05-C-1			
Diameter =	30.00	feet	
Height =	3.75	feet	
Displacement By Tank 05-C-1	2,650.72	feet <sup>3</sup>	
Volume of Tank 05-C-2			
Diameter =	5.00	feet	
Height =	3.75	feet	
Displacement By Tank 05-C-2	73.63	feet <sup>3</sup>	
Volume of Tank 05-C-3			
Diameter =	5.00	feet	
Height =	3.75	feet	
Displacement By Tank 05-C-3	73.63	feet <sup>3</sup>	
Volume of Tank 05-C-4			
Diameter =	3.50	feet	
Height =	3.75	feet	
Displacement By Tank 05-C-4	36.08	feet <sup>3</sup>	
Volume of Tanks 05-T-23, T-24 and T-25			
Diameter =	12.00	feet	
Height =	3.75	feet	
Displacement By Tanks 05-T-23, T-24 and T-25	1,272.35	feet <sup>3</sup>	
Total Displacement =	10,857.05	feet <sup>3</sup>	
	81,216	gallon	
<b>Freeboard Calculation: Based on 25-Year, 24-Hour Rain Event<sup>(2)</sup></b>			
25 Year, 24-Hour Rain event =	1.03	feet	
Total Containment Area =	14,615	feet <sup>2</sup>	
Estimated Required Freeboard =	14,980	feet <sup>3</sup>	
	112,058	gallon	
<b>Summary Calculations: Based on 25-Year, 24-Hour Rain Event</b>			
Containment Capacity	409,969	gallon	
Total Displacement	81,216	gallon	
Available Containment Capacity	328,753	gallon	
Estimated Required Freeboard	112,058	gallon	
Net Containment Capacity <sup>(3)</sup>	216,695	gallon	
Size of Tank 05-T-5	200,000	gallon	
Additional Capacity <sup>(4)</sup>	16,695	gallon	



(1) Field data was collected on July 3<sup>rd</sup> 2024.

Measurements were collected from the inside one wall to the inside of the next wall.

(2) Precipitation data from NOAA Atlas 14 [https://hdsc.nws.noaa.gov/hdsc/pfds/pfds\\_map\\_cont.html](https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html).

NOAA released the precipitation data in September 2018, and the data was obtained on July 18, 2024.

(3) Net Containment Capacity = Containment Capacity - Total Displacement - Required Freeboard.

(4) Additional Capacity is calculated as Net Containment Capacity - Capacity of Largest Container.

**Secondary Containment has sufficient capacity to contain contents of the largest storage tank and precipitation based on a 25-year, 24-hour rain event (12.3 inches).**



### EMULSIFIED OIL TREATMENT SYSEYEM (EOTS) SECONDARY CONTAINMENT CALCULATIONS

Largest Tank Capacity (05-T-4C) = 23,000 gallons

Additional Bulk Storage Contents = Two 4,625-gallon storage tanks (05-T-4D and 05-T-4E), and two 19,990-gallon storage tank (05-T-21 and 05-T-22), used to store hazardous waste.

Containment <sup>(1)</sup> - Concrete Wall		Dimensions	Unit
Containment Length =		60.00	feet
Containment Width =		55.00	feet
Containment Height =		3.00	feet
Containment Capacity =		9,900	feet <sup>3</sup>
Underground Sump Area =		54.38	feet <sup>2</sup>
Underground Sump Depth =		3.00	feet
Containment Capacity =		163.13	feet <sup>3</sup>
Total Containment Capacity =		10,063	feet <sup>3</sup>
Total Containment Capacity =		75,277	gallon
Displacement <sup>(2)</sup>			
Volume of Tank 05-T-21			
Diameter =		12.00	feet
Height =		3.00	feet
Displacement By Tank 05-T-21		339.29	feet <sup>3</sup>
Volume of Tank 05-T-22			
Diameter =		12.00	feet
Height =		3.00	feet
Displacement By Tank 05-T-22		339.29	feet <sup>3</sup>
Concrete Base for 05-T-4D and 05-T-4E			
Length =		8.50	feet
Width =		0.83	feet
Depth =		0.67	feet
		18.89	feet <sup>3</sup>
Volume of 05-T-4D and 05-T-4E			
Partially Filled Tanks		1.17	feet
Length =		17.00	feet
Diameter =		6.67	feet
		543.50	feet <sup>3</sup>
Total Tanks Displacement =		1,241	feet <sup>3</sup>
Total Displacement =		9,283	gallon
Freeboard Calculation: Based on 25-Year, 24-Hour Rain Event <sup>(2)</sup>			
25 Year, 24-Hour Rain event =		1.03	feet
Total Containment Area =		3,246	feet <sup>2</sup>
Estimated Required Freeboard =		3,327	feet <sup>3</sup>
		24,886	gallon
Summary Calculations: Based on 25-Year, 24-Hour Rain Event			
Containment Capacity		75,277	gallon
Total Displacement		9,283	gallon
Available Containment Capacity		65,994	gallon
Estimated Required Freeboard		24,886	gallon
Net Containment Capacity <sup>(3)</sup>		41,108	gallon
Size of Tank 05-T-4C		23,000	gallon
Additional Capacity <sup>(4)</sup>		18,108	gallon

(1) Field data was collected on July 3<sup>rd</sup> 2024.

Measurements were collected from the inside one wall to the inside of the next wall.

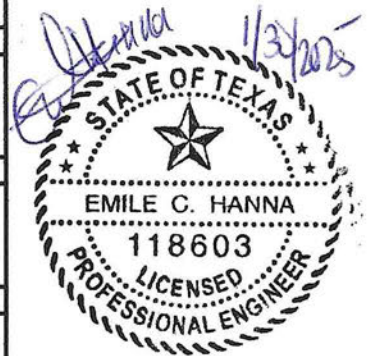
(2) Precipitation data from NOAA Atlas 14 [https://hdsc.nws.noaa.gov/hdsc/pfds/pfds\\_map\\_cont.html](https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html).

NOAA released the precipitation data in September 2018, and the data was obtained on July 18, 2024.

(3) Net Containment Capacity = Containment Capacity - Total Displacement - Required Freeboard.

(4) Additional Capacity is calculated as Net Containment Capacity - Capacity of Largest Container.

**Secondary Containment has sufficient capacity to contain contents of the largest storage tank and precipitation based on a 25-year, 24-hour rain event (12.3 inches).**

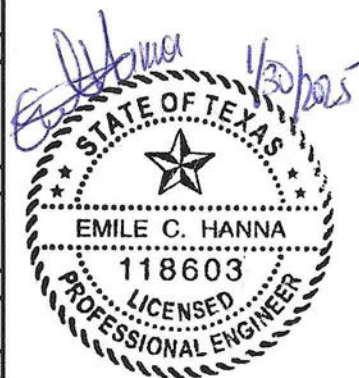


### EMULSIFIED OIL TREATMENT SYSEYEM (EOTS) - PROPOSED SECONDARY CONTAINMENT CALCULATIONS

Largest Tank Capacity (05-T-39) = 20,305 gallons

Additional Bulk Storage Contents = Three 20,305-gallon storage tanks (05-T-40, 05-T-41 and 05-T-42),  
and two 19,990-gallon storage tank (05-T-21 and 05-T-22), used to store hazardous waste.

Containment <sup>(1)</sup> - Concrete Wall		Dimensions	Unit
Containment Length =		60.00	feet
Containment Width =		55.00	feet
Containment Height =		3.00	feet
Containment Capacity =		9,900	feet <sup>3</sup>
Underground Sump Area =		54.38	feet <sup>2</sup>
Underground Sump Depth =		3.00	feet
Containment Capacity =		163.13	feet <sup>3</sup>
Total Containment Capacity =		10,063	feet <sup>3</sup>
Total Containment Capacity =		75,277	gallon
Displacement <sup>(2)</sup>			
Volume of Tank 05-T-21			
Diameter =		12.00	feet
Height =		3.00	feet
Displacement By Tank 05-T-21		339.29	feet <sup>3</sup>
Volume of Tank 05-T-22			
Diameter =		12.00	feet
Height =		3.00	feet
Displacement By Tank 05-T-22		339.29	feet <sup>3</sup>
Concrete Base for 05-T-39, T-40, T-41 and T-42			
Length =		6.75	feet
Surface Area =		118.37	feet <sup>2</sup>
Depth =		1.17	feet
Displacement by Concrete Base =		552.42	feet <sup>3</sup>
Volume of 05-T-40, 05-T-41 and 05-T-42			
Diameter =		12.00	feet
Height =		3.00	feet
		1,017.88	feet <sup>3</sup>
Total Tanks Displacement =		2,249	feet <sup>3</sup>
Total Displacement =		16,823	gallon
Freeboard Calculation: Based on 25-Year, 24-Hour Rain Event <sup>(2)</sup>			
25 Year, 24-Hour Rain event =		1.03	feet
Total Containment Area =		3,246	feet <sup>2</sup>
Estimated Required Freeboard =		3,327	feet <sup>3</sup>
		24,886	gallon
Summary Calculations: Based on 25-Year, 24-Hour Rain Event			
Containment Capacity		75,277	gallon
Total Displacement		16,823	gallon
Available Containment Capacity		58,455	gallon
Estimated Required Freeboard		24,886	gallon
Net Containment Capacity <sup>(3)</sup>		33,569	gallon
Size of Tank 05-T-39		20,305	gallon
Additional Capacity <sup>(4)</sup>		13,264	gallon



(1) Field data was collected on July 3<sup>rd</sup> 2024.

Measurements were collected from the inside one wall to the inside of the next wall.

(2) Precipitation data from NOAA Atlas 14 [https://hdsc.nws.noaa.gov/hdsc/pfds/pfds\\_map\\_cont.html](https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html).

NOAA released the precipitation data in September 2018, and the data was obtained on July 18, 2024.

(3) Net Containment Capacity = Containment Capacity - Total Displacement - Required Freeboard.

(4) Additional Capacity is calculated as Net Containment Capacity - Capacity of Largest Container.

**Secondary Containment has sufficient capacity to contain contents of the largest storage tank and precipitation based on a 25-year, 24-hour rain event (12.3 inches).**



## HEEL TANK AREA SECONDARY CONTAINMENT CALCULATIONS

Largest Tank Capacity (05-T-52) = 12,000 gallons

Bulk Storage Contents = Two 10,400-gallon storage tanks (05-T-54 and 05-T-55) ; One 10,100-gallon storage tank (05-T-53); and one 11,700-gallon storage tank (05-T-51) used to store hazardous waste.

Containment <sup>(1)</sup> - Concrete Wall		Dimensions		Unit
Containment Length 1 =			40.50	feet
Containment Width 1 =			19.50	feet
Containment Height 1 =			3.50	feet
Containment 1 Capacity =			2,764.13	feet <sup>3</sup>
Containment Length 2 =			74.33	feet
Containment Width 2 =			30.33	feet
Containment Height 2 =			3.50	feet
Containment 2 Capacity =			7,891.72	feet <sup>3</sup>
Total Containment Capacity =			10,656	feet <sup>3</sup>
			79,711	gallon
Displacement <sup>(2)</sup>				
Concrete Base 1 for Each Tank				
Length 1 =			8.00	feet
Width 1 =			4.00	feet
Depth 1 =			1.75	feet
Two Concrete Base 1 for Each Tank = X 2			112.00	feet <sup>3</sup>
Concrete Base 2 for Each Tank				
Length 2 =			6.67	feet
Width 2 =			2.00	feet
Depth 2 =			1.08	feet
Two Concrete Base 2 for Each Tank = X 2			28.89	feet <sup>3</sup>
Concrete Base 3 for Each Tank				
Length 3 =			6.67	feet
Width 3 =			2.00	feet
Depth 3 =			0.67	feet
			17.78	feet <sup>3</sup>
Displacement by Each Tank Base =			158.67	feet <sup>3</sup>
Total Displacement By Concrete Bases =			793.33	feet <sup>3</sup>
Displacement by Tanks In Containment				
8 inches in Containment for Tank 05-T-51 =			60.46	feet <sup>3</sup>
8 inches in Containment for Tank 05-T-53 =			59.33	feet <sup>3</sup>
8 inches in Containment for Tank 05-T-54 =			61.10	feet <sup>3</sup>
8 inches in Containment for Tank 05-T-55 =			61.10	feet <sup>3</sup>
Displacement by Tanks In Containment			241.99	feet <sup>3</sup>
			1,035.32	feet <sup>3</sup>
			7,745	gallon
Freeboard Calculation: Based on 25-Year, 24-Hour Rain Event <sup>(2)</sup>				
25 Year, 24-Hour Rain event =			1.03	feet
Total Containment Area =			3,045	feet <sup>2</sup>
Estimated Required Freeboard =			3,121	feet <sup>3</sup>
			23,344	gallon
Summary Calculations: Based on 25-Year, 24-Hour Rain Event				
Containment Capacity			79,711	gallon
Total Displacement			7,745	gallon
Available Containment Capacity			71,967	gallon
Estimated Required Freeboard			23,344	gallon
Net Containment Capacity <sup>(3)</sup>			48,623	gallon
Size of Tank 05-T-52			12,000	gallon
Additional Capacity <sup>(4)</sup>			36,623	gallon

(1) Field data was collected on July 3<sup>rd</sup> 2024.

Measurements were collected from the inside one wall to the inside of the next wall.

(2) Precipitation data from NOAA Atlas 14 [https://hdsc.nws.noaa.gov/hdsc/pfds/pfds\\_map\\_cont.html](https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html).

NOAA released the precipitation data in September 2018, and the data was obtained on July 18, 2024.

(3) Net Containment Capacity = Containment Capacity - Total Displacement - Required Freeboard.

(4) Additional Capacity is calculated as Net Containment Capacity - Capacity of Largest Container.

Secondary Containment has sufficient capacity to contain contents of the largest storage tank and precipitation based on a 25-year, 24-hour rain event (12.3 inches).

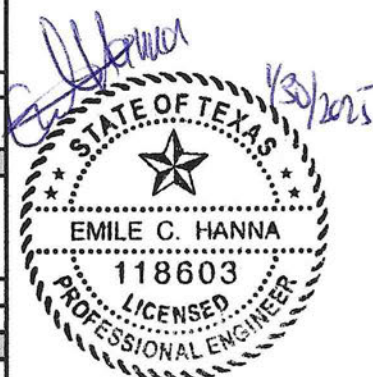


## TRUCK UNLOADING AREA SECONDARY CONTAINMENT CALCULATIONS

Largest Tank Capacity = 5,200 gallons

Additional Bulk Storage Contents = Three Tank Trucks (18-wheel trucks) each having 5,200-gallon storage capacity, and are used to unload hazardous waste onsite.

Containment <sup>(1)</sup> - Concrete Wall		Dimensions		Unit
Containment Length 1 =			103.00	feet
Containment Width 1 =			34.50	feet
Containment Height 1 =			0.42	feet
Containment 1 Capacity =			1,480.63	feet <sup>3</sup>
Containment Length 2 =			9.50	feet
Containment Width 2 =			9.50	feet
Containment Height 2 =			0.42	feet
Containment 2 Capacity =			37.91	feet <sup>3</sup>
Catch Basin Length =			3.00	feet
Catch Basin Width =			3.00	feet
Catch Basin Depth =			1.00	feet
Two Catch Basins Total Capacity =			18.00	feet <sup>3</sup>
Trench Drain Length =			16.90	feet
Trench Drain Width =			1.00	feet
Trench Drain Depth =			0.25	feet
Two Trench Drains Total Capacity =			8.45	feet <sup>3</sup>
Sump 05-B-1 and 05-B-2 Length =			15.50	feet
Sump 05-B-1 and 05-B-2 Width =			7.50	feet
Sump 05-B-1 and 05-B-2 Depth =			8.83	feet
Two Sumps Total Capacity =			2,053.75	feet <sup>3</sup>
Total Containment Capacity =			3,599	feet <sup>3</sup>
			26,920	gallon
Displacement <sup>(2)</sup>				
Truck with 18 wheels				
Diameter =			3.50	feet
Width =			0.75	feet
Truck's 18 wheels =			129.89	feet <sup>3</sup>
Total Displacement, Four 18-wheel Trucks =			519.54	feet <sup>3</sup>
Total Displacement, Four 18-wheel Trucks =			3,886	gallon
Freeboard Calculation: Based on 25-Year, 24-Hour Rain Event <sup>(2)</sup>				
25 Year, 24-Hour Rain event =			1.03	feet
Total Containment Area =			3,554	feet <sup>2</sup>
Estimated Required Freeboard =			3,642	feet <sup>3</sup>
			27,247	gallon
Summary Calculations: Based on 25-Year, 24-Hour Rain Event				
Containment Capacity			26,920	gallon
Total Displacement			3,886	gallon
Available Containment Capacity			23,034	gallon
Estimated Required Freeboard			27,247	gallon
Net Containment Capacity <sup>(3)</sup>			-4,213	gallon
Size of Tank Truck			5,200	gallon
Additional Capacity <sup>(4)</sup>			-9,413	gallon
Stormwater collection system does have additional capacity to collect a release and contain it onsite <sup>(5)</sup>				
Additional Secondary Containment Capacity <sup>(6)</sup>			25,407	gallon
Additional Net Containment Capacity			15,994	gallon



(1) Field data was collected on July 3<sup>rd</sup> 2024.

Measurements were collected from the inside one wall to the inside of the next wall.

(2) Precipitation data from NOAA Atlas 14 [https://hdsc.nws.noaa.gov/hdsc/pfds/pfds\\_map\\_cont.html](https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html). NOAA released the precipitation data in September 2018, and the data was obtained on July 18, 2024.

(3) Net Containment Capacity = Containment Capacity - Total Displacement - Required Freeboard.

(4) Additional Capacity is calculated as Net Containment Capacity - Capacity of Largest Container.

(5) The Stormwater Collection System has sufficient capacity to control a release from Truck Unloading Area and to pump it to the 05-T-583 or 05-T-589 for storage during a 25-year, 24-hour rain event.

(6) Additional Secondary Containment includes Storage Tanks 05-T-583 or 05-T-589.

Estimated Freeboard Capacity on 05-T-583 or 05-T-589 = 25,407 gallons.



## WASTEWATER EMULSIFIED OIL TREATMENT SYSEM (WW EOTS) SECONDARY CONTAINMENT CALCULATIONS

Largest Tank Capacity (05-T-574) = 20,305 gallons

Additional Bulk Storage Contents = One 20,305-gallon hazardous waste storage tanks (05-T-575).

Containment <sup>(1)</sup> - Concrete Wall		Dimensions		Unit
Containment Length =		33.33		feet
Containment Width =		26.33		feet
Containment Height =		5.00		feet
Containment Capacity =		4,388.89		feet <sup>3</sup>
Underground Sump Area =		2.25		feet <sup>2</sup>
Underground Sump Depth =		0.50		feet
Containment Capacity =		1.13		feet <sup>3</sup>
Total Containment Capacity =		4,390.01		feet <sup>3</sup>
Total Containment Capacity =		32,840		gallon
Displacement <sup>(2)</sup>				
Concrete Base for Tank 05-T-574				
Length =		6.75		feet
Surface Area =		118.37		feet <sup>2</sup>
Depth =		1.00		feet
Displacement By Concrete Base (Tank 05-T-574)		118.37		feet <sup>3</sup>
Concrete Base for Tank 05-T-575				
Length =		6.75		feet
Surface Area =		118.37		feet <sup>2</sup>
Depth =		1.00		feet
Displacement By Concrete Base (Tank 05-T-575)		118.37		feet <sup>3</sup>
Volume of Tank 05-T-575				
Diameter =		12.00		feet
Height =		4.00		feet
Displacement By Tank 05-T-575		452.39		feet <sup>3</sup>
Total Displacement =		689.14		feet <sup>3</sup>
		5,155		gallon
Freeboard Calculation: Based on 25-Year, 24-Hour Rain Event <sup>(2)</sup>				
25 Year, 24-Hour Rain event =		1.03		feet
Total Containment Area =		878		feet <sup>2</sup>
Estimated Required Freeboard =		900		feet <sup>3</sup>
		6,730		gallon
Summary Calculations: Based on 25-Year, 24-Hour Rain Event				
Containment Capacity		32,840		gallon
Total Displacement		5,155		gallon
Available Containment Capacity		27,684		gallon
Estimated Required Freeboard		6,730		gallon
Net Containment Capacity <sup>(3)</sup>		20,954		gallon
Size of Tank 05-T-574		20,305		gallon
Additional Capacity <sup>(4)</sup>		649		gallon

(1) Field data was collected on July 3<sup>rd</sup> 2024.

Measurements were collected from the inside one wall to the inside of the next wall.

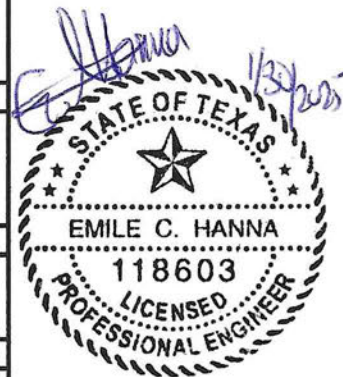
(2) Precipitation data from NOAA Atlas 14 [https://hdsc.nws.noaa.gov/hdsc/pfds/pfds\\_map\\_cont.html](https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html).

NOAA released the precipitation data in September 2018, and the data was obtained on July 18, 2024.

(3) Net Containment Capacity = Containment Capacity - Total Displacement - Required Freeboard.

(4) Additional Capacity is calculated as Net Containment Capacity - Capacity of Largest Container.

**Secondary Containment has sufficient capacity to contain contents of the largest storage tank  
and precipitation based on a 25-year, 24-hour rain event (12.3 inches).**



## **APPENDIX V.C.2**

### **ENGINEERING REPORTS AND DRAWINGS**

Pam Smolen  
Vopak Industrial Services  
2579 Battleground Road  
Deer Park, Texas 77563-0897


Reference: Certification for Tanks 05-T-39 & 05-T-40

Dear Ms. Smolen,

Enclosed is the certification for TNRCC Unit No. 65, 66 (Tank 05-T-39, 05-T-40) as required by permit No. HW-50025.

If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

  
Lloyd C. Doud P.E.  
Reg. No. 14153

**CERTIFICATION REPORT  
FOR DESIGN OF  
05-T-39 & 05-T-40  
EMULSIFIED OIL TANK SYSTEM**

**VOPAK INDUSTRIAL SERVICES USA, INC.  
DEER PARK, TEXAS  
PERMIT NO. HW-50025  
NOVEMBER 2001**

## CERTIFICATION

This is to certify that the design for the Emulsified Oil System (05-T-39 and 05-T-40) located well within the boundaries of the Vopak Industrial Services USA, Inc. Deer Park plant site has been completed in conformance with the design and construction requirements of 40CFR 264.192.

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 be the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

*Lloyd C. Doud, P.E.*

Lloyd C. Doud, P.E.

Registration No. 14153

H&M Design, Inc.



## Table of Contents

Report Summary

Response to Regulations

Attachment I          Design and Construction Information

Attachment II          List of Authorized Wastes

Attachment III          Inspection Forms

## REPORT SUMMARY

### 05-T-39 & 05-T-40 Emulsified Oil Treatment System

This report documents H&M Design, Inc's design assessment of Emulsified Oil Tanks 05-T-39, NOR 83 & 05-T-40, NOR 84 as required under 40 CFR 264 Subpart J and 40 CFR 270.16.

These tanks have the capacity of 20,305 gallons each and will be constructed of FRP. (See Attachment I) The tanks are intended to hold hazardous waste that may be corrosive as well as containing concentrations of organic and inorganic hazardous constituents.

Specifically, this assessment has included the following:

- A. The standards to which these tanks are designed and to be built, to the best of our knowledge, meet or exceed all accepted industry practices and design standards, including ASTM D-3299.
- B. The tank design is compatible with the nature of hazardous materials, as identified by Vopak Industrial Services USA, Inc., with which it will be in contact.
- C. The tanks will not be in direct contact with the soil. Therefore, soil characteristics as well as corrosion protection of the tank was not considered to be a significant part of this assessment.
- D. The tanks are not located in areas that would be susceptible to vehicular traffic.
- E. Tank foundations were designed to maintain the load of a full tank.
- F. Anchorage for the tanks is designed to prevent dislodgement.
- G. Due to location, considerations such as frost heave and seismic activity are not considered significant and therefore are not considered part of this assessment.
- H. Tank Dimensions are 12'-0" in diameter, 24'-0" in height.
- I. Tanks have V-Notch Leak Detection Design for early detection of leaks.

## RESPONSE TO REGULATIONS

### **40 CFR Ch. 1 Part 264.190**

#### **Applicability**

The requirements of this subpart apply to owners and operators of facilities that use tank systems for storing or treating hazardous waste except as otherwise provided in paragraphs (a), (b) and (c) of this section or in subsection 264.1 of this part.

**This is a new tank system and therefore must meet the requirements of this subpart.**

### **40 CFR Ch. 1 Part 264.191**

#### **Assessment of existing tank system's integrity.**

**Not applicable. This is a new tank system.**



**40 CFR Ch. 1 Part 264.192**

**Design and installation of new tank system or components**

- (a) Owners or operators of new tank systems or components must obtain and submit to the Regional Administrator, at time of submittal of Part B information, a written assessment, reviewed and certified by an independent, qualified registered professional engineer, in accordance with subsection 270.11(d) attesting that the tank system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. The assessment must show that the foundation, structural support, seams, connections, and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength, compatibility with the waste(s) to be stored or treated, and corrosion protection to ensure that it will not collapse, rupture, or fail. This assessment, which will be used by the Regional Administrator to review and approve or disapprove the acceptability of the tank system design, must include, at a minimum, the following information:

- (1) Design standard(s) according to which tank(s) and/or the ancillary equipment are constructed.

**The tanks will be constructed in accordance with ASTM D-3299. See below for pertinent information.**

<b><u>Equip. No.</u></b>	<b><u>Size</u></b>	<b><u>Capacity</u></b>	<b><u>Material</u></b>
<b>Tank 05-T-39</b>	<b>12' Dia. x 24' Tall</b>	<b>20,305 gal.</b>	<b>FRP</b>
<b>Tank 05-T-40</b>	<b>12' Dia. x 24' Tall</b>	<b>20,305 gal.</b>	<b>FRP</b>

**The tanks will be equipped with level and alarm monitoring as required.**

**Refer to Attachment I for more design and construction information.**

- (2) Hazardous characteristics of the waste(s) to be handled

**See Attachment II List of Authorized Wastes.**

- (3) For new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system will be in contact with the soil or with water, a determination by a corrosion expert of:
- (i) Factors affecting the potential for corrosion, including but not limited to:
- (A) Soil moisture content;
  - (B) Soil pH;
  - (C) Soil sulfides level;
  - (D) Soil resistivity;
  - (E) Structure to soil potential;
  - (F) Influence of nearby underground metal structures (e.g., piping);
  - (G) Existence of stray electric current;
  - (H) Existing corrosion-protection measures (e.g., coating, cathodic protection), and

- (ii) The type and degree of external corrosion protection that are needed to ensure the integrity of the tank system during the use of the tank system or component, consisting of one or more of the following:
  - (A) Corrosion-resistant materials of construction such as special alloys, fiberglass-reinforced plastic, etc.
  - (B) Corrosion-resistant coating (such as epoxy, fiberglass, etc.) with cathodic protection (e.g., impressed current or sacrificial anodes); and
  - (C) Electrical isolation devices such as insulating joints, flanges, etc.

**Not applicable, tank system will be above ground.**

- (4) For underground tank system components that are likely to be adversely affected by vehicular traffic, a determination of design or operational measures that will protect the tank system against potential damage;

**Not applicable, tank system will be above ground.**

- (5) Design considerations to ensure that:
  - (i) Tank foundations will maintain the load of a full tank;

**Tank foundations are designed to maintain full loads and conform to ACI 318. See Attachment I.**

- (ii) Tank systems will be anchored to prevent flotation or dislodgment where the tank system is placed in a saturated zone, or is located within a seismic fault zone subject to the standards of subsection 264.18(a); and

**Not applicable, tanks will not be in a saturated zone, nor are they located within a fault zone.**

- (iii) Tank systems will withstand the effects of frost heave.

**Not applicable, tank system will not be subject to frost heave.**

- (b) The owner or operator of a new tank system must ensure that proper handling procedures are adhered to in order to prevent damage to the system during installation. Prior to covering, enclosing, or placing a new tank system or component in use, an independent, qualified installation inspector or an independent, qualified, registered professional engineer, either of whom is trained and experienced in the proper installation of tank systems or components, must inspect the system for the presence of any of the following items:

- (1) Weld breaks;
- (2) Punctures;
- (3) Scrapes of protective coatings;
- (4) Cracks;
- (5) Corrosion;
- (6) Other structural damage or inadequate construction or installation.

All discrepancies must be remedied before the tank system is covered, enclosed, or placed in use.

**Tank system will be properly installed and inspected to insure there is no evidence of weld breaks, punctures, scrapes, cracks, etc. (See Attachment III, External Inspection Checklist).**

- (c) New tank systems or components that are placed underground and that are backfilled must be provided with a backfill material that is a noncorrosive, porous, homogeneous substance and that is installed so that the backfill is placed completely around the tank and compacted to ensure that the tank and piping are fully and uniformly supported.

**Not applicable, tank system will be above ground.**

- (d) All new tanks and ancillary equipment must be tested for tightness prior to being covered, enclosed or placed in use. If a tank system is found not to be tight, all repairs necessary to remedy the leak(s) in the system must be performed prior to the tank system being covered, enclosed, or placed into use.

**Tanks and ancillary equipment will be tested for tightness. Secondary containment is provided for the entire system. (See Attachment III, External Inspection Checklist).**

- (e) Ancillary equipment must be supported and protected against physical damage and excessive stress due to settlement, vibration, expansion or contraction.

**All ancillary equipment (piping, pumps, instruments, etc.) will be designed per ANSI B31.3 code requirements.**

- (f) The owner or operator must provide the type and degree of corrosion protection recommended by an independent corrosion expert, based on the information provided under paragraph (a)(3) of this section, to ensure the integrity of the tank system during use of the tank system. The installation of a corrosion protection system that is field fabricated must be supervised by an independent corrosion expert to ensure proper installation.

**Tank system and secondary containment will be properly coated for external corrosion protection. The secondary containment will be coated with Epoxy Novolac, Vinyl Ester or equivalent coating. (See Attachment I)**

- (g) The owner or operator must obtain and keep on file at the facility written statements by those persons required to certify the design of the tank system and supervise the installation of the tank system in accordance with the requirements of paragraphs (b) through (f) of this section to attest that the tank system was properly designed and installed and that repairs, pursuant to paragraphs (b) and (d) of this section were performed. These written statements must also include the certification statement as required in subsection 270.11(d) of this chapter.

**Tank system design is certified and written statement is kept on file.**

**Installation will be certified and written statement will be kept on file.**

**40 CFR Ch. 1 Part 264.193**

**Containment and detection of releases.**

- (a) In order to prevent the release of hazardous waste or hazardous constituents to the environment, secondary containment that meets the requirements of this section must be provided (except as provided in paragraphs (f) and (g) of this section):
  - (1) For all new tank systems or components, prior to their being put into service;
  - (2) For all existing tank systems used to store or treat EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027, within two years after January 12, 1987;
  - (3) For those existing tank systems of known and documented age, within two years after January 12, 1987 or when tank systems have reached 15 years of age, whichever comes later;
  - (4) For those existing tank systems for which the age can not be documented, within eight years of January 12, 1987 ; but if the age of the facility is greater than seven years, secondary containment must be provided by the time the facility reaches 15 years of age, or within two years of January 12 ,1987, whichever comes later; and
  - (5) For tank systems that store or treat materials that become hazardous waste subsequent to January 12, 1987 within the time intervals required in paragraphs (a)(1) through (a)(4) of this section, except that the date that a material becomes hazardous waste must be used in place of January 12, 1987.
- (b) Secondary containment systems must be:
  - (1) Designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system; and
  - (2) Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

**The tank system will be located within a concrete slab and wall. All exposed concrete will be sealed with Epoxy Novolac, Vinyl Ester or equivalent coating. (See Attachment I and Secondary Containment Coating Report 05-200-0001)**

- (c) To meet the requirements of paragraph (b) of this section, secondary containment systems must be at a minimum:
  - (1) Constructed of or lined with materials that are compatible with the waste(s) to be placed in the tank system and must have sufficient strength and thickness to prevent failure owing to pressure gradients (including static head and external hydrological forces), physical contact with the waste to which it is exposed, climatic conditions, and the stress of daily operation (including stresses from nearby vehicular traffic).
  - (2) Placed on a foundation or base capable of providing support to the secondary containment system, resistance to pressure gradients above or below the system, and capable of preventing failure due to settlement, compression or uplift;
  - (3) Provided with a leak detection system that is designed and operated so that it will detect the failure of either the primary or secondary containment structure

or the presence of any release of hazardous waste or accumulated liquid in the secondary containment system within 24 hours, or at the earliest practicable time if the owner or operator can demonstrate to the Regional Administrator that existing detection technologies or site conditions will not allow detection of a release within 24 hours; and

- (4) Sloped or otherwise designed or operated to drain or remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked waste and accumulated precipitation must be removed from the secondary containment system within 24 hours, or in as timely a manner as possible to prevent harm to human health and the environment, if the owner or operator can demonstrate to the Regional Administrator that removal of the released waste or accumulated precipitation cannot be accomplished within 24 hours.

**The system will be located on a concrete slab with a wall that will have secondary coating. Leak detection will be a part of mandated daily inspection of the area, specifically within the walled area.**

(d) Secondary containment for tanks must include one or more of the following devices:

- (1) A liner (external to the tank);
- (2) A vault;
- (3) A double-walled tank; or
- (4) An equivalent device as approved by the Regional Administrator

**For this tank system, (1) above applies.**

(e) In addition to the requirements of paragraphs (b), (c), and (d) of this section, secondary containment systems must satisfy the following requirements:

- (1) External liner systems must be:
  - (i) Designed or operated to contain 100 percent of the capacity of the largest tank within its boundary;
  - (ii) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a 25 year, 24-hour rainfall event.
  - (iii) Free of cracks or gaps; and
  - (iv) Designed and installed to surround the tank completely and to cover all surrounding earth likely to come into contact with the waste if the waste is released from the tank(s) (i.e. capable of preventing lateral as well as vertical migration of the waste).

**The tank system is designed to comply with all of the above requirements (See Attachment I).**

- (2) Vault systems must be:
- (i) Designed or operated to contain 100 percent of the capacity of the largest tank within its boundary;
  - (ii) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a 25 year, 24-hour rainfall event.
  - (iii) Constructed with chemical-resistant water stops in place at all joints (if any);
  - (iv) Provided with an impermeable interior coating or lining that is compatible with the stored waste and that will prevent migration of waste into the concrete;
  - (v) Provided with a means to protect against the formation of an ignition of vapors within the vault, if the waste being stored or treated:
    - (A) Meets the definition of ignitable waste under subsection 262.21 of this chapter; or
    - (B) Meets the definition of reactive waste under subsection 262.21 of this chapter, and may form an ignitable or explosive vapor
  - (vi) Provided with an exterior moisture barrier or be otherwise designed or operated to prevent migration of moisture into the vault if the vault is subject to hydraulic pressure.

**Not applicable**

- (3) Double-walled tanks must be:
- (a) Designed as an integral structure (i.e., an inner tank completely enveloped within an outer shell) so that any release from the inner tank is contained by an outer shell.
  - (b) Protected if constructed of metal, from both corrosion of the primary tank interior and of the external surface of the outer shell: and
  - (c) Provided with a built-in continuous leak detection system capable of detecting a release within 24 hours or at the earliest practicable time, if the owner or operator can demonstrate to the Regional Administrator, and the Regional Administrator concludes that the existing detection technology or site conditions would not allow detection of a release within 24 hours.

**Not applicable**

- (f) Ancillary equipment must be provided with secondary containment (e.g., trench, jacketing, double-walled piping) that meets the requirements of paragraphs (b) and (c) of this section except for:
- (1) Aboveground piping (exclusive of flanges, joints, valves, and other connections) that are visually inspected for leaks on a daily basis;
  - (2) Welded flanges, welded joints, and welded connections, that are visually inspected for leaks on a daily basis.
  - (3) Sealless or magnetic coupling pumps and sealless valves, that are visually inspected for leaks on a daily basis; and

- (4) Pressurized aboveground piping systems with automatic shut-off devices (e.g., excess flow check valves, flow metering shut down devices, loss of pressure actuated shut-off devices) that are visually inspected for leaks on a daily basis.

**All ancillary equipment will be located within the liner area.**

- (g) The owner or operator may obtain a variance from the requirements of this section if the Regional Administrator find, as a result of a demonstration by the owner or operator that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous waste or hazardous constituents into the ground water; or surface water at least as effectively as secondary containment during the active life of the tank system *or* that in the event of a release that does migrate to ground water or surface water, no substantial present or potential hazard will be posed to human health or the environment. New underground tank systems may not, per a demonstration in accordance with paragraph (g)(2) of this section, be exempted from the secondary containment requirements of this section.

**Not applicable. No variance requested.**



**40 CFR Ch. 1 Part 264.194**

**General operating requirements.**

- (a) Hazardous wastes or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the containment system to rupture, leak, corrode, or otherwise fail.

**The operating procedures will provide for the evaluation of all waste streams before they are transferred into the tank system. (See Attachment I)**

- (b) The owner or operator must use appropriate controls and practices to prevent spills and overflows from tank or containment systems. These include at minimum:
  - (1) Spill prevention controls (e.g., check valves, dry disconnect couplings);
  - (2) Overflow prevention controls (e.g., level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank); and
  - (3) Maintenance of sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation.

**The tank system design and operating procedures will prevent this from occurring. (See Attachment I)**

- (c) The owner or operator must comply with the requirements of subsection 264.196 if a leak or spill occurs in the tank system.

**Plant operating procedures on file.**

**40 CFR Ch. 1 Part 264.198**

Special requirements for ignitable or reactive wastes.

- (a) Ignitable or reactive waste must not be placed in tank systems unless:
  - (1) The waste is treated, rendered or mixed before or immediately after placement in the tank system so that:
    - (i) The resulting waste, mixture or dissolved material no longer meets the definition of ignitable or reactive waste under subsection 261.21 or 261.23 of this chapter, and
    - (ii) Section 264.179 (b) is complied with; or
  - (2) The waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to ignite or react; or
  - (3) The tank system is used solely for emergencies.

**The above requirement will be part of the tank system operating procedures.**

- (b) The owner or operator of a facility where ignitable or reactive waste is stored or treated in a tank must comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alley or an adhering property line that can be built upon as required in tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code"

**The tank system will comply with the above requirement.**

**ATTACHMENT I**  
**DESIGN AND CONSTRUCTION INFORMATION**

**H&M Design. Inc.**

**DESIGN REPORT FOR TANKS 05-T-39 & 05-T-40**  
**Emulsified Oil Treatment System Tanks**

Tanks 05-T-39 & 05-T-40 are designed to accept a variety of waste streams (Attachment II) from both sister companies and selected commercial customers for holding and pretreating. Prior to receipt of the waste stream, the physical properties of this stream will be evaluated. It will then be determined if the tank has available capacity, and if it is compatible with the waste stream.

In accordance with the Plant Work Order, the main block valves and vents are properly lined-up and the transfer to the tank takes place. Small quantities of raw material and steam may be added to these tanks for pretreatment. Overfills will be prevented by the tank's level indication. A high level alarm is connected to a high level probe in the top of each tank and will sound in the control room when a high level is reached. Pump start/stop and valves are located at the tanks.

In the event that the level indication or alarm fails, an overflow will flow through the tank relief piping.

These tanks have two breathing vents sized for both inbreathing and outbreathing. The vent with the lower pressure setting relieves to the Caustic Scrubber, Carbon Filter, or Thermal Oxidizer. The vent with the higher pressure setting provides back up and relieves to the atmosphere. Breathing vent sizing is based on API-2000.

These tanks are equipped with an emergency vent that provides additional venting under major upset or fire conditions.

**CONTAINMENT SYSTEM DESIGN CRITERIA**

The key regulatory requirements for secondary containment system are:

1. Secondary containment system must be designed, installed and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system.
2. Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

To meet these requirements the rules further specify that the system must be:

3. Constructed of materials that are compatible with, and resistant to the waste stored, and have sufficient structural strength to prevent failure due to pressure gradients, climatic conditions and stresses of daily operation.
4. Have an adequate foundation for support, resistance to pressure gradients, and capable of preventing failure due to settlement, compression or uplift.
5. Provided with a leak detection system to detect leaks within 24 hours.
6. Designed for removal of any accumulated liquids from leaks, spills, or precipitation.
7. The regulations further state that for tanks the secondary containment must include one of the following.
  - A. A liner external to the tank.
  - B. A vault
  - C. A double walled tank.
  - D. An Equivalent device approved by the Regional Administrator or his designate (TNRCC).
8. For vaults & external liners the following criteria must also be followed:
  - A. Tank secondary containment must also be designed to contain the volume of the largest waste tank in the containment area plus the rainfall from a 25 year, 24 hour rainfall event (approximately 9.9 inches) if it can enter the containment area.
  - B. Must be free of cracks or gaps.

- C. Designed and installed to surround the tank completely, and to cover all surrounding earth likely to come in contact with the waste released from the tank.
- 9. All ancillary piping, valves, sight glasses, pumps, etc. should be located within the concrete containment area to provide containment for these components. Piping or the other components located outside this containment area will require individual containment as listed below.
  - A. Above ground piping with welded flanges and joints is considered satisfactory for secondary containment if visually inspected on a daily basis.
- 10. Leak detection determination is made visually by the appearance of product running out the V Notch to the slab.

For secondary containment coating type and technical data see Report 05-200-0001.



# AVAILABLE CONTAINMENT

GROSS CONTAINMENT AREA = 3101 FT<sup>2</sup>

LESS AREA FOR:

T-39 AREA = 113 FT<sup>2</sup>  
T-40 AREA = 113 FT<sup>2</sup>  
T-41 AREA = 113 FT<sup>2</sup>  
T-21 AREA = 113 FT<sup>2</sup>  
T-22 AREA = 113 FT<sup>2</sup>

NET AREA = 2536 FT<sup>2</sup> = A

A x H = V

7.481 GAL. = 1 FT<sup>3</sup>

EXISTING CONTAINMENT CAPACITY:

2536 (A) x 3' (H) = 7,608 FT<sup>3</sup>(V) x 7.481  
= 56,915 GAL. (AVAILABLE)

## CONTAINMENT REQUIRED

LARGEST TANK CAPACITY = 20,305 GAL. (T-42)

25 YEAR, 24 HR. RAINFALL

0.825 x 3101 = 2558 FT<sup>2</sup> x 7.481 = 19,136 GAL.

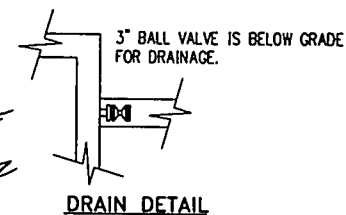
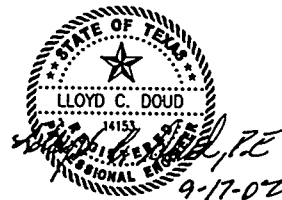
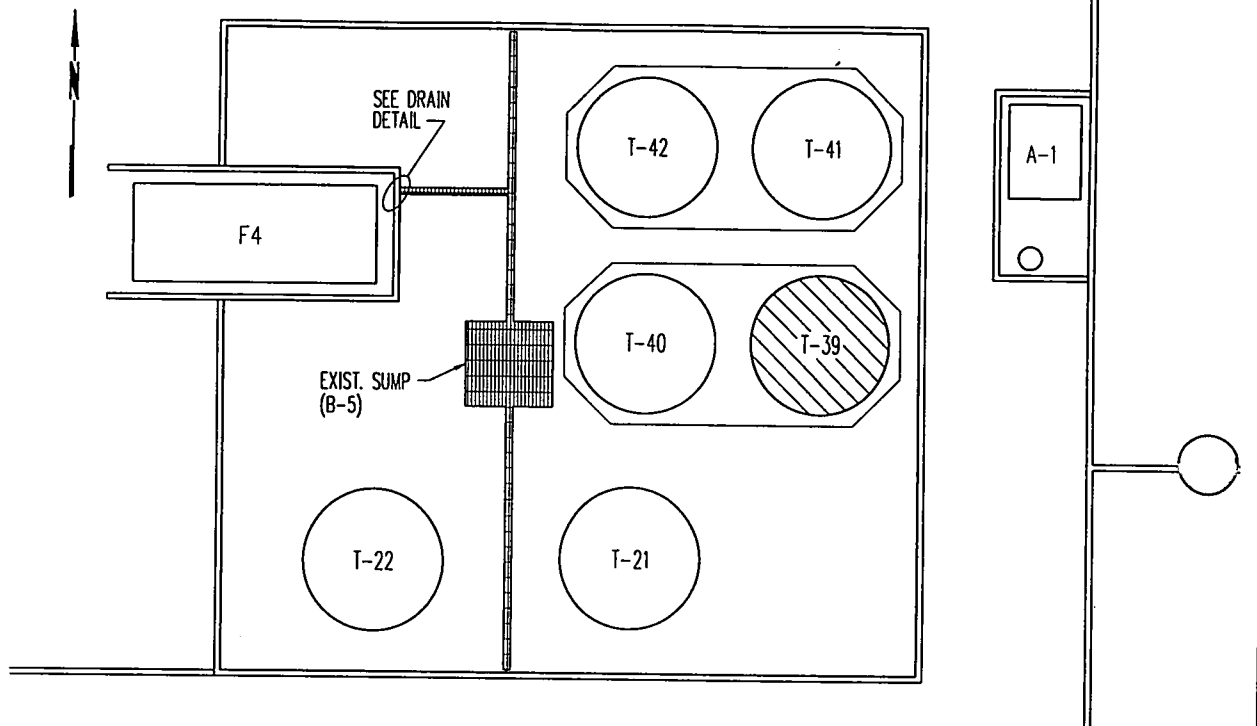
= 39,441 GAL. (REQUIRED)

## ADDITIONAL CAPACITY

56,915 GAL. (AVAILABLE)

- 39,441 GAL. (REQUIRED)

17,474 GAL. ADDITIONAL CAPACITY



CEA-00-N/A

No.	Revision	Date	By	App.	Name:	Date:
				Drawn	J.M.	02/07/01
				Approved by	P.SMOLEN	
1	REVISED CONTAINMENT FOR 3'-0" TALL CONTAINMENT WALL	SEP 2002	TEH	Engineer/Design Co.	HEM DESIGN, INC. 18022 SPENCER HWY. LA PORTE, TEXAS 77571 PH. (281) 830-8738	
0	ISSUED FOR CONSTRUCTION	OCT 5 2001	J.M.	CAD Name	05-10-0004 REV0.DWG	
A	ISSUED FOR REVIEW	NOV 7 2001	J.M.	Scale:	3/32"=1'-0"	

**Vopak**  
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2759 Battleground Road  
Deer Park, Texas 77536  
(281) 604-6150

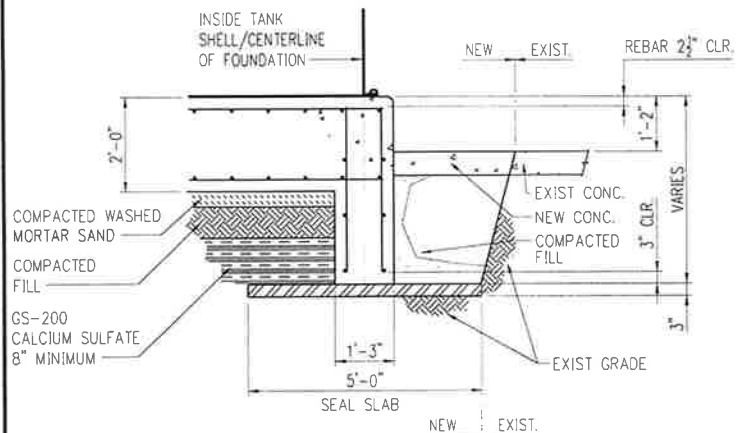
REPORTS FOR RCRA PART "B"  
SECONDARY CONTAINMENT - TANK 05-T-39

EOTS (ALT 1)

NOR #83

Sheet Size:	Location:	Job #:	Drawing Number:	Rev. #
B		760-EM	05-10-0004	1

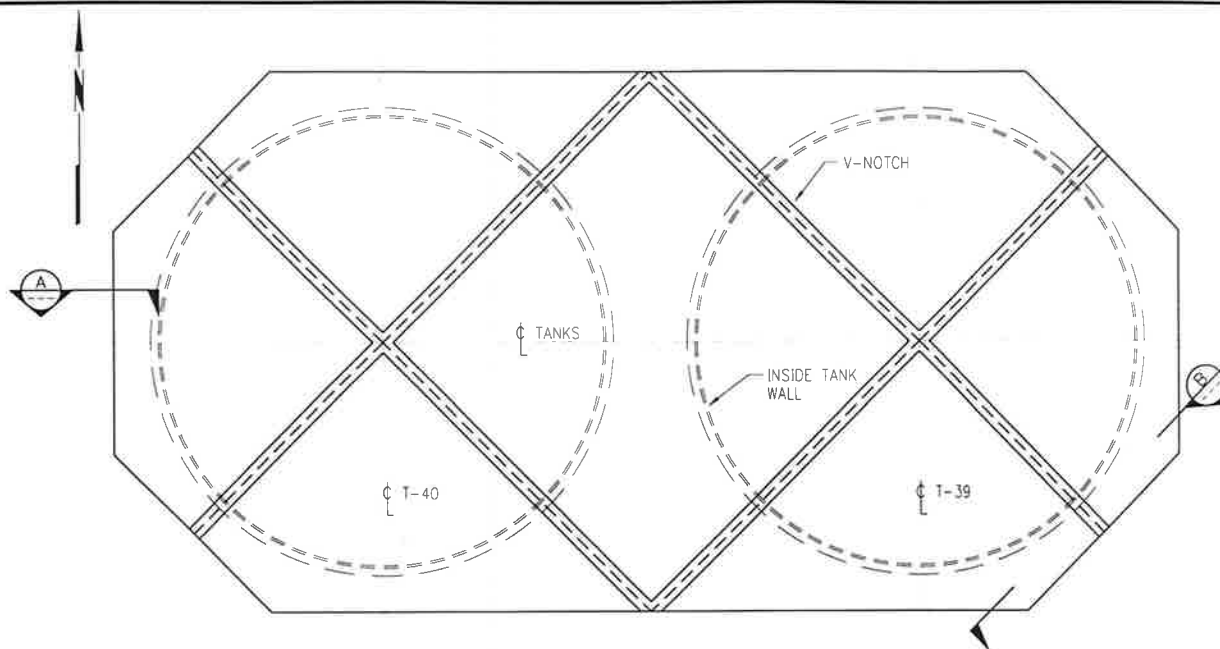




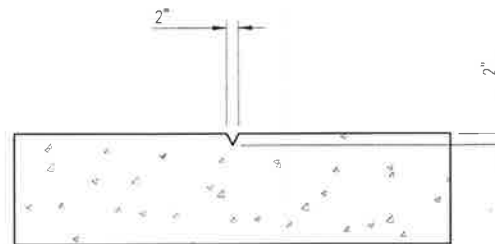
SECTION "A-A"

### GENERAL CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL CONFORM TO THE JOB SPECIFICATIONS, ACI-318 LATEST EDITION.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.
3. ALL REINFORCING BARS SHALL BE NEW, CLEAN, GRADE 60, BILLET-STEEL AS PER ASTM DESIGNATION A-615.
4. ALL REINFORCING BARS SHALL BE DETAILED AND PLACED AS PER ACI MANUALS 315 AND 318 LATEST EDITION.
5. ALL ANCHOR BOLTS SHALL CONFORM TO ASTM DESIGNATION A-307, UNLESS NOTED, AND SHALL BE GALVANIZED AS PER ASTM A-153.
6. ALL EXPOSED CONCRETE AND GROUT CORNERS AND EDGES SHALL BE CHAMFERED 3/4" UNLESS NOTED OTHERWISE.
7. CONSTRUCTION JOINTS BETWEEN NEW AND HARDENED CONCRETE SHALL BE CLEAN, FREE OF LAITANCE AND INTENTIONALLY ROUGHENED TO A FULL AMPLITUDE OF 1/4" INCH.
8. ALL EXPOSED CONCRETE TO BE SEALED WITH EPOXY NOVOLAC, VINYL ESTER OR EQUIVALENT.



PLAN  
V-NOTCH DETECTION DESIGN



SECTION "B-B"



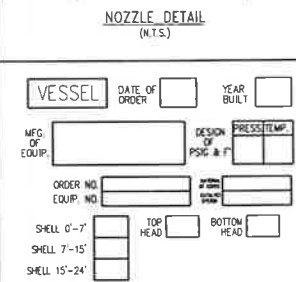
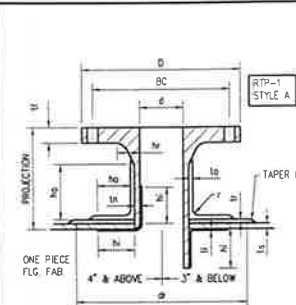
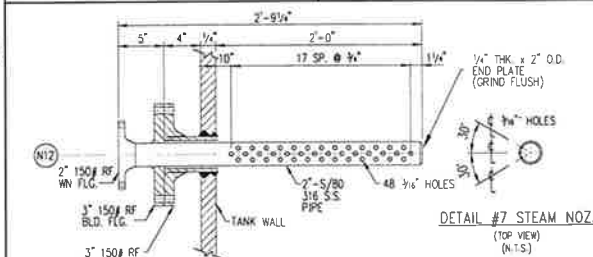
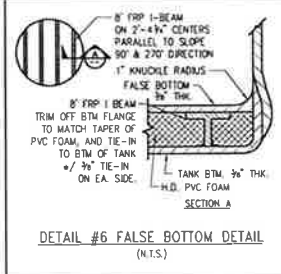
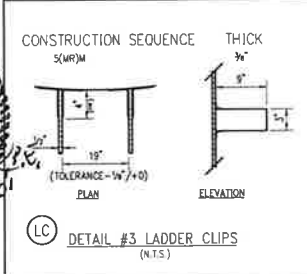
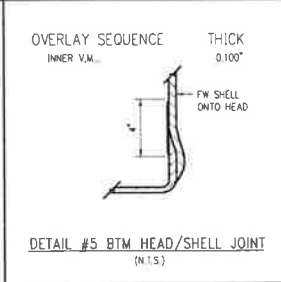
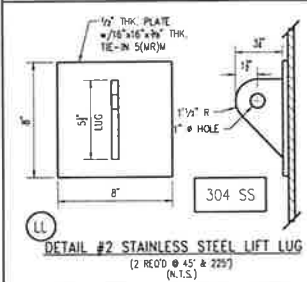
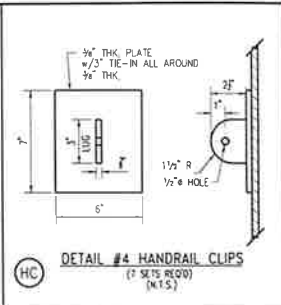
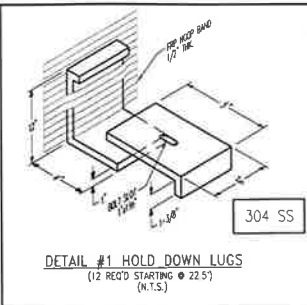
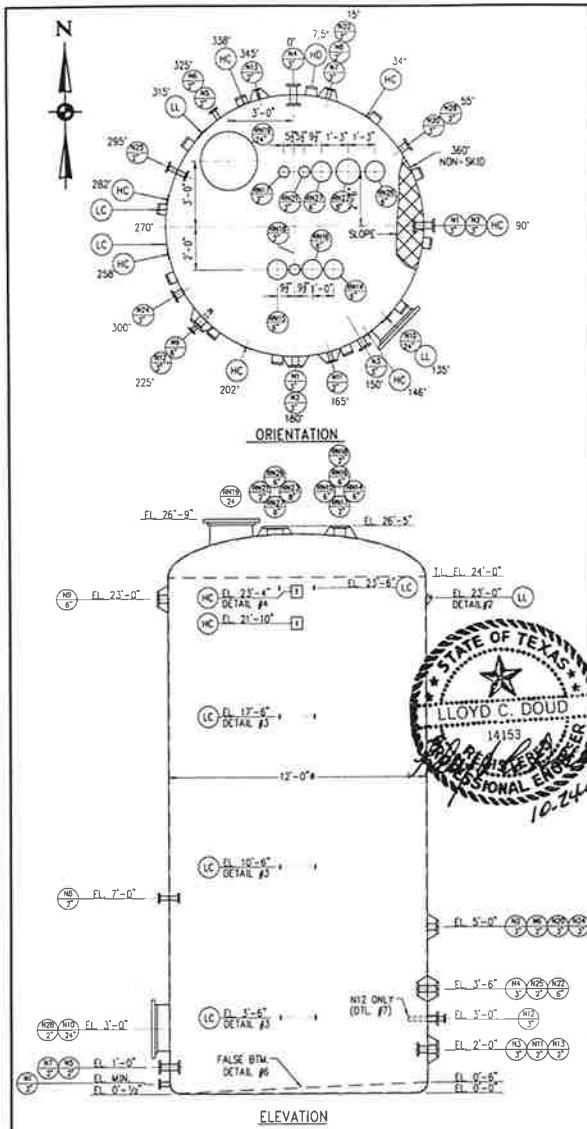
CEA-00-N/A

No.	Revision	Date	By	App.	Name:	Date:
					Drawn J.M.	06/14/00
					Approved by P.SMOLEN	
					Engineer/Design Co. HEM DESIGN, INC.	
						8602 SPENCER HWY. LA PORTE, TEXAS 77571 PH # (281) 930-8750
0	ISSUED FOR CONSTRUCTION	11/25/00	J.M.		CAD Name	05-50-0003 REV0.DWG
A	ISSUED FOR REVIEW	01/14/01	J.M.		Scale:	1/16"=1'-0"

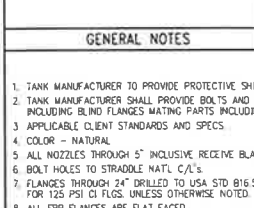
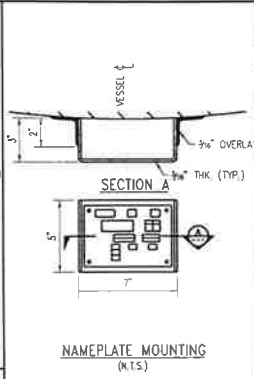
**Vopak**  
INDUSTRIAL SERVICES

2759 Battleground Road  
Deer Park, Texas 77536  
(281) 604-6150

REPORTS FOR RCRA PART "B"				
FOUNDATION SECTIONS - TANK 05-T-39				
EOTS				
NOR #83				
Sheet Size:	Location:	Job #:	Drawing Number:	Rev. #
B		760-EM	05-50-0003	0



MARK	NO.	QTY.	NOZ.	RATING	NECK	FLG.	QTY.	DIA.	DIA.	DIA.	BOLT	NOZ.	BOLTS	REIN.	REIN.	OUT.	OUT.	IN.	IN.	R	REMARKS
N1	1	3	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	LOW PUMP SUCTION W/INT. FLANGE
N2	1	3	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	HIGH PUMP SUCTION
N3	1	3	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	TRUCK LINE INLET
N4	1	3	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	RC-CIRCULATION W/INT. FLANGE
N5	1	2	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	PERIODIC INLET
N6	1	2	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	SAMPLE PT
N7	1	2	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	TEMPERATURE INDICATOR
N8	1	2	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	TEMPERATURE INDICATOR
N9	1	6	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	SPARE
N10	1	24	35	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	YES	1/2	1/2	1/2	4	0.100	4	1/2	MANWAY W/ COVER
N11	1	2	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	ACID
N12	1	3	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	STEAM W/2" SS. STRIP PIPE
N13	1	2	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	N.W/INT. FLANGE
RN14	1	6	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	P/V. VENT
RN15	1	6	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	VAPOR VENT
RN16	1	6	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	LEVEL
RN17	1	2	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	NITROGEN
RN18	1	2	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	HIGH LEVEL ALARM
RN19	1	24	35	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	YES	1/2	1/2	1/2	4	0.100	4	1/2	M.W. EMERGENCY VENT
N20	1	3	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	LOW P/V. TRUCK
RN21	1	2	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	NOZ.
N22	1	6	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	HAZ. FROM F-45-3, T-291
RN23	1	8	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	HAZ. HATCH
N24	1	3	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	SPARE
N25	1	2	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	TEMPERATURE INDICATOR
RN26	1	6	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	SPARE
RN27	1	6	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	SPARE
RN28	1	2	150	1/2	1 1/2	1 1/2	1	1 1/2	1 1/2	1 1/2	6	6	NO	1/2	1/2	1/2	4	0.100	4	1/2	FROM DRUM PAD



MATERIALS OF CONSTRUCTION	
SHELL	FRP
HEADS	FRP
FLANGES	FRP
NOZZLE NECKS	FRP
VESSEL SUPPORTS	TEFLON COATED S.S.
EXT. BOLTS/NUTS	304 SS
INT. BOLTS/NUTS	N/A
GASKETS	W/TON
CATALYST SYSTEMS	
LINER	FRP
STRUCTURAL	FRP
DESIGN CONDITIONS	
DESIGN PRESS.	1" H <sub>2</sub> O
DESIGN TEMP.	250° F
OPERATING PRESS.	-----
OPERATING TEMP.	-----
CORR. ALLOW.	0.100
CODE	ASTM D-3299
HYDRO TEST	WATER
SP. CR. CONTENTS	1.1
WIND	150 MPH
SEISMO	0
CAPACITIES AND WEIGHTS	
OPERATING CAP.	20,305 GAL.
FULL CAPACITY	-----
EMPTY WEIGHT	-----
OPERATING WEIGHT	N/A

- GENERAL NOTES**
1. TANK MANUFACTURER TO PROVIDE PROTECTIVE SHIELDS FOR ALL FLANGES AND OPENINGS
  2. TANK MANUFACTURER SHALL PROVIDE BOLTS AND HEX NUTS FOR ALL MATING PARTS INCLUDING BLIND FLANGES MATING PARTS INCLUDING BLIND FLANGES ONLY WHERE NOTED.
  3. APPLICABLE CLIENT STANDARDS AND SPECS
  4. COLOR - NATURAL
  5. ALL NOZZLES THROUGH 5" INCLUSIVE RECEIVE BLADE TYPE DISKETS UNLESS OTHERWISE NOTED
  6. BOLT HOLES TO STRADDLE NATL. C/L'S
  7. FLANGES THROUGH 24" DRILLED TO USA STD B16.5 FOR 150 PSI STL FLOS. ABOVE 24" TO B16.1 FOR 125 PSI CI FLOS. UNLESS OTHERWISE NOTED.
  8. ALL FRP FLANGES ARE FLAT FACED.

NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY
A	ISSUE FOR REVIEW	10/10/08	AG												
D	ISSUE FOR CONSTRUCTION	03/01/09	AG												

**Vopak**  
INDUSTRIAL SERVICES

2759 Ballground Road  
Deer Park, Texas 77636  
(281) 604-6150

ENGINEER: H & M DESIGN, INC.  
H & M DESIGN, INC.  
1902 SPENCER HWY.  
LA PORTE, TEXAS 77551

PH: (281) 930-8750  
FAX: (281) 930-8711  
E-MAIL: hnm@vopak.com

DRAWN BY: CD DATE: 11/00

CHECKED BY: PAM SMOLIN

H&M JOB #: 760-EM

PROJ. ENG.: VOPAK ENGR. SCALES: NTS

ENGINEER JOB NO.

REPORTS FOR RCRA PART "B"	
FABRICATION DETAILS FOR 05-T-39	
EOTS	
NOR #83	Rev. 0
Shr. size: D	Acad File Name: 05-60-T-39-1.DWG
Drawing Number: 05-60-T-39-1	

# **AVAILABLE CONTAINMENT**

GROSS CONTAINMENT AREA = 3101 FT<sup>2</sup>

LESS AREA FOR:

T-39 AREA = 113 FT<sup>2</sup>

T-40 AREA = 113 FT<sup>2</sup>

T-41 AREA = 113 FT<sup>2</sup>

T-21 AREA = 113 FT<sup>2</sup>

T-22 AREA = 113 FT<sup>2</sup>

NET AREA = 2536 FT<sup>2</sup> = A

A<sup>3</sup> x H = V

7.481 GAL. = 1 FT<sup>3</sup>

EXISTING CONTAINMENT CAPACITY:

2536 (A) x 3' (H) = 7,608 FT<sup>3</sup>(V) x 7.481

= 56,915 GAL. (AVAILABLE)

## **CONTAINMENT REQUIRED**

LARGEST TANK CAPACITY = 20,305 GAL. (T-42)

25 YEAR, 24 HR. RAINFALL

0.825 x 3101 = 2558 FT<sup>3</sup> x 7.481 = 19,136 GAL.

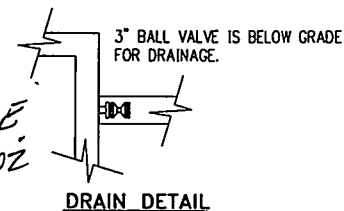
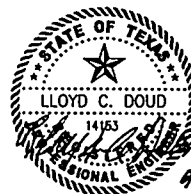
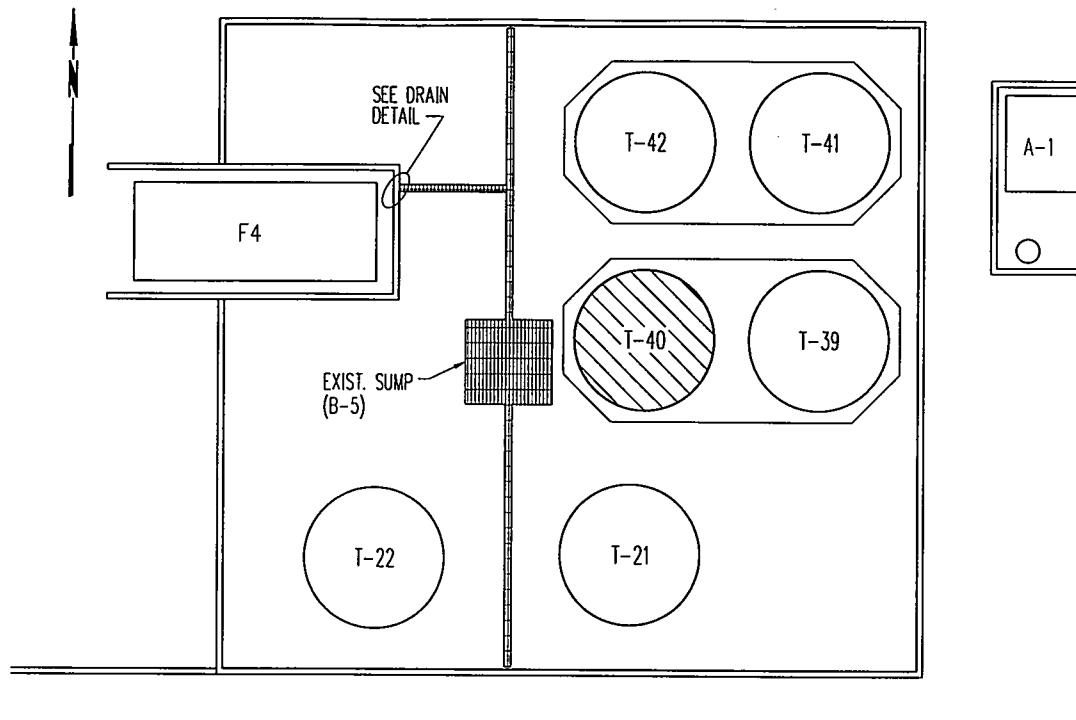
= 39,441 GAL. (REQUIRED)

## **ADDITIONAL CAPACITY**

56,915 GAL. (AVAILABLE)

- 39,441 GAL. (REQUIRED)

17,474 GAL. ADDITIONAL CAPACITY



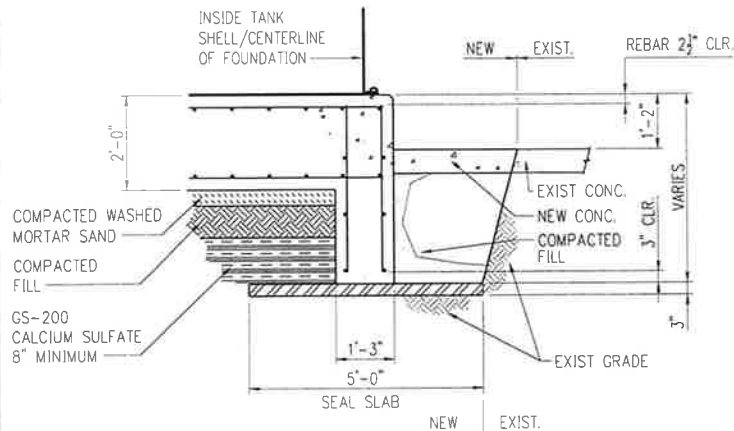
No.	Revision	Date	By	App.	Name:	Date:
				Drawn	J.M.	02/07/01
				Approved by	P.SMOLEN	
				Engineer/Design Co.	H&M DESIGN, INC. 8602 SPENCER HWY. LA PORTE, TEXAS 77571 PH # (281) 830-8750	
1	REVISED CONTAINMENT FOR 3'-0" TALL CONTAINMENT WALL	SEP 7 2001	TEH			
0	ISSUED FOR CONSTRUCTION	OCT 5 2001	J.M.		CAD Name	05-10-0005 REVO.DWG
A	ISSUED FOR REVIEW	NOV 7 2001	J.M.		Scale:	3/32"=1'-0"

**Vopak**  
INDUSTRIAL SERVICES

2759 Battleground Road  
Deer Park, Texas 77536  
(281) 604-6150

REPORTS FOR RCRA PART "B"				
SECONDARY CONTAINMENT - TANK 05-T-40				
EOTS				
NOR #84				
Sheet Size:	Location:	Job #:	Drawing Number:	Rev. #
B		760-EM	05-10-0005	1

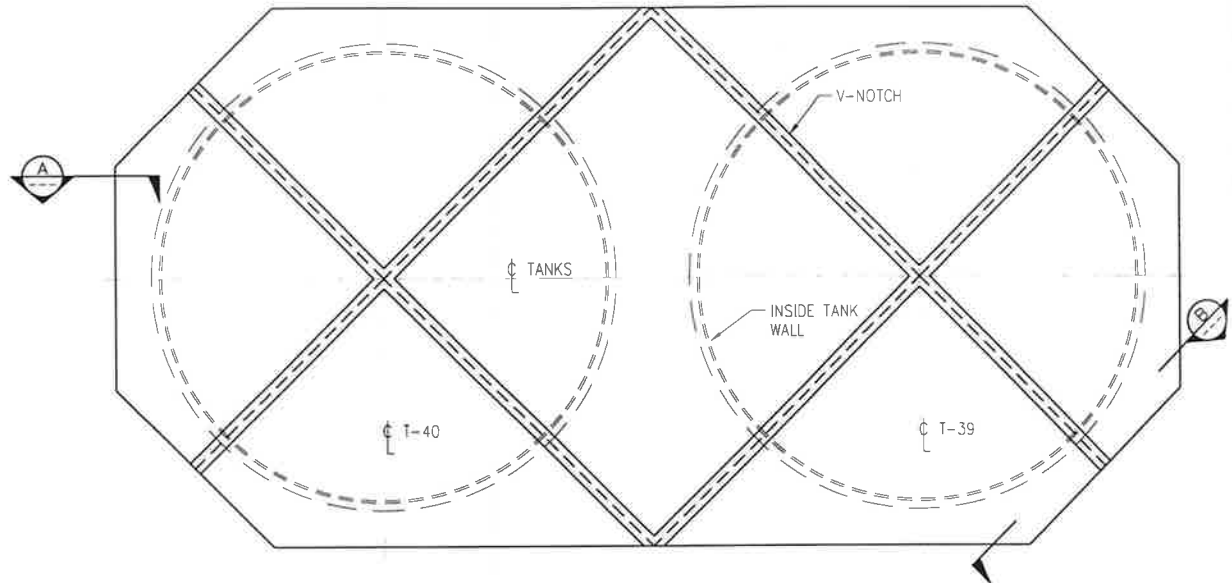
CEA-00-N/A



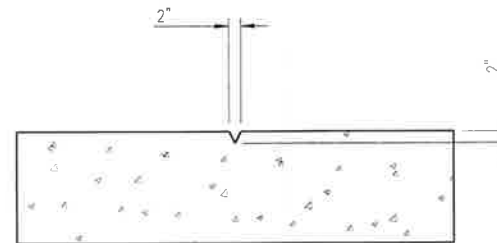
SECTION "A-A"

# GENERAL CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL CONFORM TO THE JOB SPECIFICATIONS, ACI-318 LATEST EDITION.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.
3. ALL REINFORCING BARS SHALL BE NEW, CLEAN, GRADE 60, BILLET-STEEL AS PER ASTM DESIGNATION A-615.
4. ALL REINFORCING BARS SHALL BE DETAILED AND PLACED AS PER ACI MANUALS 315 AND 318 LATEST EDITION.
5. ALL ANCHOR BOLTS SHALL CONFORM TO ASTM DESIGNATION A-307, UNLESS NOTED, AND SHALL BE GALVANIZED AS PER ASTM A-153.
6. ALL EXPOSED CONCRETE AND GROUT CORNERS AND EDGES SHALL BE CHAMFERED 3/4" UNLESS NOTED OTHERWISE.
7. CONSTRUCTION JOINTS BETWEEN NEW AND HARDENED CONCRETE SHALL BE CLEAN, FREE OF LAITANCE AND INTENTIONALLY ROUGHENED TO A FULL AMPLITUDE OF 1/4" INCH.
8. ALL EXPOSED CONCRETE TO BE SEALED WITH EPOXY NOVOLAC, VINYL ESTER OR EQUIVALENT.



PLAN  
V-NOTCH DETECTION DESIGN



SECTION "B-B"



CEA-00-N/A

No.	Revision	Date	By	App.	Name:	Date:
				Drawn	J.M.	06/14/00
				Approved by	P.SMOLEN	
				Engineer/Design Co.	H&M DESIGN, INC. 8602 SPENCER HWY. LA PORTE, TEXAS 77571 PH # (281) 930-8750	
0	ISSUED FOR CONSTRUCTION		J.M.	CAD Name	05-50-0004 REV0.DWG	
A	ISSUED FOR REVIEW		J.M.	Scale:	1/16"=1'-0"	

**Vopak**  
INDUSTRIAL SERVICES

2759 Battleground Road  
Deer Park, Texas 77536  
(281) 604-6150

REPORTS FOR RCRA PART "B"				
FOUNDATION SECTIONS - TANK 05-T-40				
EOTS				
NOR #84				
Sheet Size:	Location:	Job #:	Drawing Number:	Rev. #
B		760-EM	05-50-0004	0



**ATTACHMENT II**  
**LIST OF AUTHORIZED WASTES**

Authorized wastes for Tank 05-T-39 and 05-T-40 per Permit No. HW-50025:

<b>Waste</b>	<b>Source</b>	<b>TNRCC Waste Classification</b>	<b>Hazard Code</b>
Railcar Washwater	Generated	H, 1, 2	I,T,C,H,E,R
Railcar Heel Solids - Organic	Generated	H, 1, 2	I,T,C,H,E,R
Railcar Heel Liquids - Organic	Generated	H, 1, 2	I,T,C,H,E,R
Spent Fuels	Generated	H, 1, 2	I,T,C,H,E,R
Railcar Heel Solids - Inorganic	Generated	H, 1, 2	I,T,C,H,E,R
Railcar Heel Liquids - Inorganic	Generated	H, 1, 2	I,T,C,H,E,R
Ignitable Solvent	Generated	H, 1, 2	I,T,C,H,E,R
Acidic Aqueous Waste	Generated	H, 1, 2	I,T,C,H,E,R
Aqueous Waste - Low Solvents	Generated	H, 1, 2	I,T,C,H,E,R
Aqueous Waste - High Dissolved Solids	Generated	H, 1, 2	I,T,C,H,E,R
Mercury Contaminated Waste	Generated	H, 1, 2	I,T,C,H,E,R
Caustic Aqueous Waste	Generated	H, 1, 2	I,T,C,H,E,R
Organic Sludge	Generated	H, 1, 2	I,T,C,H,E,R
Inorganic Sludge	Generated	H, 1, 2	I,T,C,H,E,R
Liquid Organic Wastes	Generated	H, 1, 2	I,T,C,H,E,R
Inorganic Salt	Generated	H, 1, 2	I,T,C,H,E,R
Washwaters with Low Organics	Generated	H, 1, 2	I,T,C,H,E,R
Contaminated Stormwater	Generated	H, 1, 2	I,T,C,H,E,R
Inorganic Ignitable or Acidic Aqueous Waste	Generated	H, 1, 2	I,T,C,H,E,R
Organic Ignitable or Acidic Aqueous Waste	Generated	H, 1, 2	I,T,C,H,E,R
Pesticide Waste	Received	H, 1, 2	I,T,C,H,E,R
Metallic Waste	Received	H, 1, 2	I,T,C,H,E,R
Caustic Waste	Received	H, 1, 2	I,T,C,H,E,R
Acidic Waste	Received	H, 1, 2	I,T,C,H,E,R
Neutralized Spent Acids	Received	H, 1, 2	I,T,C,H,E,R
Organic Waste	Received	H, 1, 2	I,T,C,H,E,R
Inorganic Waste	Received	H, 1, 2	I,T,C,H,E,R
Waste Oils and Solvents	Received	H, 1, 2	I,T,C,H,E,R
Aqueous Waste	Received	H, 1, 2	I,T,C,H,E,R
Washwater (including Railcar, Tank Truck, and Tanks washwater)	Received	H, 1, 2	I,T,C,H,E,R
Contaminated Stormwater	Received	H, 1, 2	I,T,C,H,E,R
Sludges	Received	H, 1, 2	I,T,C,H,E,R
Off-Spec Products Discarded as Waste	Received	H, 1, 2	I,T,C,H,E,R

**ATTACHMENT III**  
**INSPECTION FORMS**



**H&M Design, Inc.**

**Containment System Design Assessment**

The design assessment for the existing secondary containment system where the 05-T-39 & 05-T-40 waste tank will be installed was completed on April 15, 2000. This system will be inspected per the attached checklist, and approved by an independent professional engineer registered in the State of Texas.

A reinforced dike area immediately surrounding the tank provides Secondary Containment. This area also provides secondary containment for all ancillary equipment located at the tank site. This diked area serves as an external liner between the tank system and the ground. The lined concrete surfaces are compatible with the wastes stored and will prevent migration through the surface to the ground.

The containment area is sloped so that any spilled waste or rainwater enters the trench and/or sump. The sump and trench are also constructed of reinforced concrete with an epoxy novolac, vinyl ester or equivalent liner. The trench penetrates the containment area through an isolation block valve that will be kept closed at all times. Any accumulated wastes and or rainfall can be pumped back into a compatible RCRA approved tank within the system.

This containment area has a volume of 75,887 gallons which is well in excess of the largest tank capacity of 20,305 gallons, and also provides adequate storage capacity for a 25 year, 24 hour rainfall event of approximately 9.9 inches (Attachment I). This leaves a resultant of approximately 36,446 gallons in additional capacity.

All seams, joints, and cracks are caulked and sealed with an epoxy type joint material that is compatible with the waste materials stored in this tank.

The reinforced concrete structure provides sufficient strength for expected pressure gradients, climatic conditions, and stress of daily operations.

Any leaks or spills into the containment area will be visible immediately, so leak detection is provided by continuous visual inspections by operations as well as daily close-up walk thru inspections. Unit operators, as required, will document any leak, spill, or other concerns.



Larry Hogan  
H&M Design, Inc.

**H&M DESIGN, INC.**

**HAZARDOUS WASTE STORAGE TANK ASSESSMENTS**

**EXTERNAL INSPECTION CHECKLIST**

**Tank No.** \_\_\_\_\_

_____	Loss of resin thickness/ Shell thickness
_____	Cracks and leaks at welds
_____	Cracks at nozzle connections
_____	Cracks and leaks at seams
_____	Cracking at plate joints
_____	Corrosion pits
_____	Hammer testing
_____	Vent condition for blockage
_____	Valve stem and flange connections
_____	Open ended lines
_____	Pump seals
_____	Hydro Test documentation
_____	Vent size
_____	Conformance with Application Codes
_____	Any modifications since last assessment

Comments:

\_\_\_\_\_  
Signature

Pam Smolen  
Vopak Industrial Services  
2579 Battleground Road  
Deer Park, Texas 77563-0897


Reference: Certification for Tanks 05-T-41 & 05-T-42

Dear Ms. Smolen,

Enclosed is the certification for TNRCC Unit No. 67, 68 (Tank 05-T-41, 05-T-42) as required by permit No. HW-50025.

If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

  
Lloyd C. Doud P.E.  
Reg. No. 14153

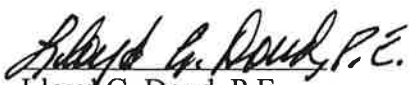
**CERTIFICATION REPORT  
FOR DESIGN OF  
05-T-41 and 05-T-42  
FUELS TANK SYSTEM**

**VOPAK INDUSTRIAL SERVICES USA INC.  
DEER PARK, TEXAS  
PERMIT NO. HW-50025  
NOVEMBER 2001**

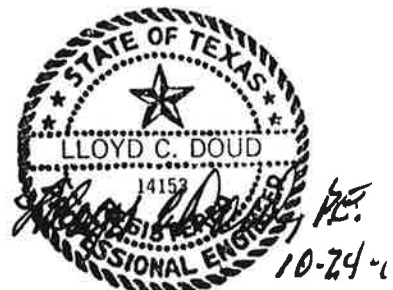
## CERTIFICATION

This is to certify that the design for the Fuels Tank System (05-T-41 and 05-T-42) located well within the boundaries of the Vopak Industrial Services USA Inc. Deer Park plant site has been completed in conformance with the design and construction requirements of 40CFR 264.192.

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 be the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.



Lloyd C. Doud, P.E.  
Registration No. 14153  
H&M Design, Inc.



## Table of Contents

Report Summary

Response to Regulations

Attachment I          Design and Construction Information

Attachment II         List of Authorized Wastes

Attachment III        Inspection Forms

## REPORT SUMMARY

### 05-T-41 & 05-T-42 Fuels Tank System

This report documents H&M Design, Inc's design assessment of Fuel Tanks 05-T-41, NOR 85 & 05-T-42, NOR 86 as required under 40 CFR 264 Subpart J and 40 CFR 270.16.

These tanks will have the capacity of 20,305 gallons each and will be constructed of 304L Stainless Steel or equal (See Attachment I). The tanks are intended to hold hazardous waste, which may be corrosive as well as containing concentrations of organic and inorganic hazardous constituents.

Specifically, this assessment has included the following:

- A. The standards, to which this tank will be designed and built, meet or exceed all accepted industry practices and design standards, including API Standard 650.
- B. The tank design is compatible with the nature of hazardous materials, as identified by Vopak Industrial Services USA Inc., with which it will be in contact.
- C. The tanks will not be in direct contact with the soil. Therefore, soil characteristics as well as corrosion protection of the tank was not considered to be a significant part of this assessment.
- D. The tanks are not located in areas that would be susceptible to vehicular traffic.
- E. Tank foundations were designed to maintain the load of a full tank.
- F. Anchorage for the tanks is designed to prevent dislodgement.
- G. Due to location, considerations such as frost heave and seismic activity are not considered significant and therefore are not considered part of this assessment.
- H. Tank Dimensions are 12'-0" in diameter, 24'-0" in height.
- I. Tanks have V-Notch Leak Detection Design for early detection of leaks.

## RESPONSE TO REGULATIONS

### **40 CFR Ch. 1 Part 264.190**

#### **Applicability**

The requirements of this subpart apply to owners and operators of facilities that use tank systems for storing or treating hazardous waste except as otherwise provided in paragraphs (a), (b) and (c) of this section or in subsection 264.1 of this part.

**This is a new tank system of liquid wastes and therefore must meet the requirements of this subpart.**

### **40 CFR Ch. 1 Part 264.191**

#### **Assessment of existing tank system's integrity.**

**Not applicable. This is a new tank system.**



**40 CFR Ch. 1 Part 264.192**

**Design and installation of new tank system or components**

- (a) Owners or operators of new tank systems or components must obtain and submit to the Regional Administrator, at time of submittal of Part B information, a written assessment, reviewed and certified by an independent, qualified registered professional engineer, in accordance with subsection 270.11(d) attesting that the tank system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. The assessment must show that the foundation, structural support, seams, connections, and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength, compatibility with the waste(s) to be stored or treated, and corrosion protection to ensure that it will not collapse, rupture, or fail. This assessment, which will be used by the Regional Administrator to review and approve or disapprove the acceptability of the tank system design, must include, at a minimum, the following information:

- (1) Design standard(s) according to which tank(s) and/or the ancillary equipment are constructed.

**The tanks will be constructed in accordance with API 650. See below for pertinent information.**

<u>Equip. No.</u>	<u>Size</u>	<u>Capacity</u>	<u>Material</u>
Tank 05-T-40	12' Dia. x 24' Tall	20,305 gal.	304L SS
Tank 05-T-41	12' Dia. x 24' Tall	20,305 gal.	304L SS

**The tanks will be equipped with level and alarm monitoring as required.**

**Refer to Attachment I for more design and construction information.**

- (2) Hazardous characteristics of the waste(s) to be handled

**See Attachment II List of Authorized Wastes.**

- (3) For new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system will be in contact with the soil or with water, a determination by a corrosion expert of:
- (i) Factors affecting the potential for corrosion, including but not limited to:
- (A) Soil moisture content;
  - (B) Soil pH;
  - (C) Soil sulfides level;
  - (D) Soil resistivity;
  - (E) Structure to soil potential;
  - (F) Influence of nearby underground metal structures (e.g., piping);
  - (G) Existence of stray electric current;

- (H) Existing corrosion-protection measures (e.g., coating, cathodic protection), and
- (ii) The type and degree of external corrosion protection that are needed to ensure the integrity of the tank system during the use of the tank system or component, consisting of one or more of the following:
  - (A) Corrosion-resistant materials of construction such as special alloys, fiberglass-reinforced plastic, etc.
  - (B) Corrosion-resistant coating (such as epoxy, fiberglass, etc.) with cathodic protection (e.g., impressed current or sacrificial anodes); and
  - (C) Electrical isolation devices such as insulating joints, flanges, etc.

**Not applicable, tank system will be above ground.**

- (4) For underground tank system components that are likely to be adversely affected by vehicular traffic, a determination of design or operational measures that will protect the tank system against potential damage;  
**Not applicable, tank system will be above ground.**

- (5) Design considerations to ensure that:
  - (i) Tank foundations will maintain the load of a full tank;

**Tank foundations are designed to maintain full loads and conform to ACI 318. See Attachment I.**

- (ii) Tank systems will be anchored to prevent flotation or dislodgment where the tank system is placed in a saturated zone, or is located within a seismic fault zone subject to the standards of subsection 264.18(a); and

**Not applicable, tanks will not be in a saturated zone, nor are they located within a fault zone.**

- (iii) Tank systems will withstand the effects of frost heave.

**Not applicable, tank system will not be subject to frost heave.**

- (b) The owner or operator of a new tank system must ensure that proper handling procedures are adhered to in order to prevent damage to the system during installation. Prior to covering, enclosing, or placing a new tank system or component in use, an independent, qualified installation inspector or an independent, qualified, registered professional engineer, either of whom is trained and experienced in the proper installation of tank systems or components, must inspect the system for the presence of any of the following items:

- (1) Weld breaks;
- (2) Punctures;
- (3) Scrapes of protective coatings;
- (4) Cracks;
- (5) Corrosion;
- (6) Other structural damage or inadequate construction or installation.

All discrepancies must be remedied before the tank system is covered, enclosed, or placed in use.

**Tank system will be properly installed and inspected to insure there is no evidence of weld breaks, punctures, scrapes, cracks, etc. (See Attachment III, External Inspection Checklist).**

- (c) New tank systems or components that are placed underground and that are backfilled must be provided with a backfill material that is a noncorrosive, porous, homogeneous substance and that is installed so that the backfill is placed completely around the tank and compacted to ensure that the tank and piping are fully and uniformly supported.

**Not applicable, tank system will be above ground.**

- (d) All new tanks and ancillary equipment must be tested for tightness prior to being covered, enclosed or placed in use. If a tank system is found not to be tight, all repairs necessary to remedy the leak(s) in the system must be performed prior to the tank system being covered, enclosed, or placed into use.

**Tanks and ancillary equipment will be tested for tightness. Secondary containment is provided for the entire system. (See Attachment III, External Inspection Checklist).**

- (e) Ancillary equipment must be supported and protected against physical damage and excessive stress due to settlement, vibration, expansion or contraction.

**All ancillary equipment (piping, pumps, instruments, etc.) will be designed per ANSI B31.3 code requirements.**

- (f) The owner or operator must provide the type and degree of corrosion protection recommended by an independent corrosion expert, based on the information provided under paragraph (a)(3) of this section, to ensure the integrity of the tank system during use of the tank system. The installation of a corrosion protection system that is field fabricated must be supervised by an independent corrosion expert to ensure proper installation.

**Tank system and secondary containment will be properly coated for external corrosion protection. The secondary containment will be coated with Epoxy Novolac, Vinyl Ester or equivalent coating. (See Attachment I)**

- (g) The owner or operator must obtain and keep on file at the facility written statements by those persons required to certify the design of the tank system and supervise the installation of the tank system in accordance with the requirements of paragraphs (b) through (f) of this section to attest that the tank system was properly designed and installed and that repairs, pursuant to paragraphs (b) and (d) of this section were performed. These written statements must also include the certification statement as required in subsection 270.11(d) of this chapter.

**Tank system design is certified and written statement is kept on file.**

**Installation will be certified and written statement will be kept on file.**

**40 CFR Ch. 1 Part 264.193**

**Containment and detection of releases.**

- (a) In order to prevent the release of hazardous waste or hazardous constituents to the environment, secondary containment that meets the requirements of this section must be provided (except as provided in paragraphs (f) and (g) of this section):
  - (1) For all new tank systems or components, prior to their being put into service;
  - (2) For all existing tank systems used to store or treat EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027, within two years after January 12, 1987;
  - (3) For those existing tank systems of known and documented age, within two years after January 12, 1987 or when tank systems have reached 15 years of age, whichever comes later;
  - (4) For those existing tank systems for which the age can not be documented, within eight years of January 12, 1987 ; but if the age of the facility is greater than seven years, secondary containment must be provided by the time the facility reaches 15 years of age, or within two years of January 12 ,1987, whichever comes later; and
  - (5) For tank systems that store or treat materials that become hazardous waste subsequent to January 12, 1987 within the time intervals required in paragraphs (a)(1) through (a)(4) of this section, except that the date that a material becomes hazardous waste must be used in place of January 12, 1987.
- (b) Secondary containment systems must be:
  - (1) Designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system; and
  - (2) Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

**The tank system will be located within a concrete slab and wall. All exposed concrete will be sealed with Epoxy Novolac, Vinyl Ester or equivalent coating. (See Attachment I and Secondary Containment Coating Report 05-200-0001)**

- (c) To meet the requirements of paragraph (b) of this section, secondary containment systems must be at a minimum:
  - (1) Constructed of or lined with materials that are compatible with the waste(s) to be placed in the tank system and must have sufficient strength and thickness to prevent failure owing to pressure gradients (including static head and external hydrological forces), physical contact with the waste to which it is exposed, climatic conditions, and the stress of daily operation (including stresses from nearby vehicular traffic).
  - (2) Placed on a foundation or base capable of providing support to the secondary containment system, resistance to pressure gradients above or below the

system, and capable of preventing failure due to settlement, compression or uplift;

- (3) Provided with a leak detection system that is designed and operated so that it will detect the failure of either the primary or secondary containment structure or the presence of any release of hazardous waste or accumulated liquid in the secondary containment system within 24 hours, or at the earliest practicable time if the owner or operator can demonstrate to the Regional Administrator that existing detection technologies or site conditions will not allow detection of a release within 24 hours; and
- (4) Sloped or otherwise designed or operated to drain or remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked waste and accumulated precipitation must be removed from the secondary containment system within 24 hours, or in as timely a manner as possible to prevent harm to human health and the environment, if the owner or operator can demonstrate to the Regional Administrator that removal of the released waste or accumulated precipitation cannot be accomplished within 24 hours.

**The system will be located on a concrete slab with a wall that will have secondary coating. Leak detection will be a part of mandated daily inspection of the area, specifically within the walled area.**

- (d) Secondary containment for tanks must include one or more of the following devices:
  - (1) A liner (external to the tank);
  - (2) A vault;
  - (3) A double-walled tank; or
  - (4) An equivalent device as approved by the Regional Administrator

**For this tank system, (1) above applies.**

(e) In addition to the requirements of paragraphs (b), (c), and (d) of this section, secondary containment systems must satisfy the following requirements:

(1) External liner systems must be:

- (i) Designed or operated to contain 100 percent of the capacity of the largest tank within its boundary;
- (ii) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a 25 year, 24-hour rainfall event.
- (iii) Free of cracks or gaps; and
- (iv) Designed and installed to surround the tank completely and to cover all surrounding earth likely to come into contact with the waste if the waste is released from the tank(s) (i.e. capable of preventing lateral as well as vertical migration of the waste).

**The tank system is designed to comply with all of the above requirements (See Attachment I).**

- (2) Vault systems must be:
- (i) Designed or operated to contain 100 percent of the capacity of the largest tank within its boundary;
  - (ii) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a 25 year, 24-hour rainfall event.
  - (iii) Constructed with chemical-resistant water stops in place at all joints (if any);
  - (iv) Provided with an impermeable interior coating or lining that is compatible with the stored waste and that will prevent migration of waste into the concrete;
  - (v) Provided with a means to protect against the formation of an ignition of vapors within the vault, if the waste being stored or treated:
    - (A) Meets the definition of ignitable waste under subsection 262.21 of this chapter; or
    - (B) Meets the definition of reactive waste under subsection 262.21 of this chapter, and may form an ignitable or explosive vapor
  - (vi) Provided with an exterior moisture barrier or be otherwise designed or operated to prevent migration of moisture into the vault if the vault is subject to hydraulic pressure.

**Not applicable**

- (3) Double-walled tanks must be:
- (a) Designed as an integral structure (i.e., an inner tank completely enveloped within an outer shell) so that any release from the inner tank is contained by an outer shell.
  - (b) Protected if constructed of metal, from both corrosion of the primary tank interior and of the external surface of the outer shell: and
  - (c) Provided with a built-in continuous leak detection system capable of detecting a release within 24 hours or at the earliest practicable time, if the owner or operator can demonstrate to the Regional Administrator, and the Regional Administrator concludes that the existing detection technology or site conditions would not allow detection of a release within 24 hours.

**Not applicable**

- (f) Ancillary equipment must be provided with secondary containment (e.g., trench, jacketing, double-walled piping) that meets the requirements of paragraphs (b) and (c) of this section except for:
- (1) Aboveground piping (exclusive of flanges, joints, valves, and other connections) that are visually inspected for leaks on a daily basis;



- (2) Welded flanges, welded joints, and welded connections, that are visually inspected for leaks on a daily basis.
- (3) Sealless or magnetic coupling pumps and sealless valves, that are visually inspected for leaks on a daily basis; and
- (4) Pressurized aboveground piping systems with automatic shut-off devices (e.g., excess flow check valves, flow metering shut down devices, loss of pressure actuated shut-off devices) that are visually inspected for leaks on a daily basis.

**All ancillary equipment will be located within the liner area.**

- (g) The owner or operator may obtain a variance from the requirements of this section if the Regional Administrator find, as a result of a demonstration by the owner or operator that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous waste or hazardous constituents into the ground water; or surface water at least as effectively as secondary containment during the active life of the tank system *or* that in the event of a release that does migrate to ground water or surface water, no substantial present or potential hazard will be posed to human health or the environment. New underground tank systems may not, per a demonstration in accordance with paragraph (g)(2) of this section, be exempted from the secondary containment requirements of this section.

**Not applicable. No variance requested.**

**40 CFR Ch. 1 Part 264.194**

**General operating requirements.**

- (a) Hazardous wastes or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the containment system to rupture, leak, corrode, or otherwise fail.

**The operating procedures will provide for the evaluation of all waste streams before they are transferred into the tank system. (See Attachment I)**

- (b) The owner or operator must use appropriate controls and practices to prevent spills and overflows from tank or containment systems. These include at minimum:
  - (1) Spill prevention controls (e.g., check valves, dry disconnect couplings);
  - (2) Overflow prevention controls (e.g., level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank); and
  - (3) Maintenance of sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation.

**The tank system design and operating procedures will prevent this from occurring. (See Attachment I)**

- (c) The owner or operator must comply with the requirements of subsection 264.196 if a leak or spill occurs in the tank system.

**Plant operating procedures on file.**

**40 CFR Ch. 1 Part 264.198**

Special requirements for ignitable or reactive wastes.

- (a) Ignitable or reactive waste must not be placed in tank systems unless:
  - (1) The waste is treated, rendered or mixed before or immediately after placement in the tank system so that:
    - (i) The resulting waste, mixture or dissolved material no longer meets the definition of ignitable or reactive waste under subsection 261.21 or 261.23 of this chapter, and
    - (ii) Section 264.179 (b) is complied with; or
  - (2) The waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to ignite or react; or
  - (3) The tank system is used solely for emergencies.

**The above requirement will be part of the tank system operating procedures.**

- (b) The owner or operator of a facility where ignitable or reactive waste is stored or treated in a tank must comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alley or an adjoining property line that can be built upon as required in tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code"

**The tank system will comply with the above requirement.**

**ATTACHMENT I**  
**DESIGN AND CONSTRUCTION INFORMATION**

**H&M Design, Inc.**

**DESIGN REPORT FOR TANKS 05-T-41 & 05-T-42**  
**FUELS TANK SYSTEM**

Tanks 05-T-40 & 05-T-41 are designed to accept a variety of waste streams, primarily fuels, (Attachment II) from both sister companies and selected commercial customers for holding and pretreating. Prior to receipt of the waste stream, the physical properties of this stream will be evaluated. It will then be determined if the tank has available capacity, and if it is compatible with the waste stream.

In accordance with the Plant Work Order, the main block valves and vents are properly lined-up and the transfer to the tank takes place. The tanks can be heated with steam. Overfills will be prevented by the tank's level indication. A high level alarm is connected to a high level probe in the top of each tank and will sound in the control room when a high level is reached. Pump start/stop and valves are located at the tanks.

In the event that the level indication or alarm fails, an overfill will flow through the tank relief piping.

These tanks have two breathing vents sized for both in breathing and out breathing. The vent with the lower pressure setting relieves to the Carbon Filter or Thermal Oxidizer. The vent with the higher pressure setting provides back-up and relieves to the atmosphere. Breathing vent sizing is based on API-2000.

These tanks are equipped with an emergency vent that provides additional venting under major upset or fire conditions.

**CONTAINMENT SYSTEM DESIGN CRITERIA**

The key regulatory requirements for secondary containment system are:

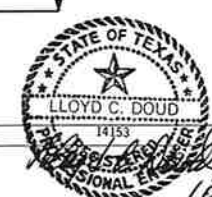
1. Secondary containment system must be designed, installed and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system.
2. Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

To meet these requirements the rules further specify that the system must be:

3. Constructed of materials that are compatible with, and resistant to the waste stored, and have sufficient structural strength to prevent failure due to pressure gradients, climatic conditions and stresses of daily operation.
4. Have an adequate foundation for support, resistance to pressure gradients, and capable of preventing failure due to settlement, compression or uplift.
5. Provided with a leak detection system to detect leaks within 24 hours.
6. Designed for removal of any accumulated liquids from leaks, spills, or precipitation.
7. The regulations further state that for tanks the secondary containment must include one of the following.
  - A. A liner external to the tank.
  - B. A vault
  - C. A double walled tank.
  - D. An Equivalent device approved by the Regional Administrator or his designate (TNRCC).
8. For vaults & external liners the following criteria must also be followed:
  - A. Tank secondary containment must also be designed to contain the volume of the largest waste tank in the containment area plus the rainfall from a 25 year, 24 hour rainfall event (approximately 9.9 inches) if it can enter the containment area.
  - B. Must be free of cracks or gaps.

- C. Designed and installed to surround the tank completely, and to cover all surrounding earth likely to come in contact with the waste released from the tank.
- 9. All ancillary piping, valves, sight glasses, pumps, etc. should be located within the concrete containment area to provide containment for these components. Piping or the other components located outside this containment area will require individual containment as listed below.
  - A. Above ground piping with welded flanges and joints is considered satisfactory for secondary containment if visually inspected on a daily basis.
- 10. Leak detection determination is made visually by the appearance of product running out the V Notch to the slab.

For secondary containment coating type and technical data see Report 05-200-0001.



REPORTS FOR RCRA PART "B"				
05-T-41/42 SYSTEM P&ID				
FUELS				
T-41:NOR#85 T-42:NOR#86				
Shr. size	Added file Name	Drawing Number	Rev.	
D	05-30-0005-rev0	05-30-0005	0	



# AVAILABLE CONTAINMENT

GROSS CONTAINMENT AREA = 3101 FT<sup>2</sup>

LESS AREA FOR:

T-39 AREA = 113 FT<sup>2</sup>  
T-40 AREA = 113 FT<sup>2</sup>  
T-41 AREA = 113 FT<sup>2</sup>  
T-21 AREA = 113 FT<sup>2</sup>  
T-22 AREA = 113 FT<sup>2</sup>

NET AREA = 2536 FT<sup>2</sup> = A

A x H = V

7,481 GAL. = 1 FT<sup>3</sup>

EXISTING CONTAINMENT CAPACITY:

2536 (A) x 3' (H) = 7,608 FT<sup>3</sup>(V) x 7.481  
= 56,915 GAL. (AVAILABLE)

## CONTAINMENT REQUIRED

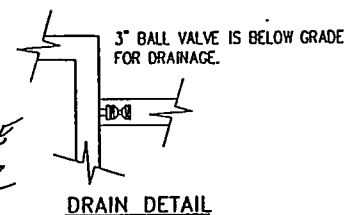
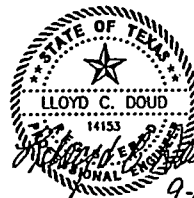
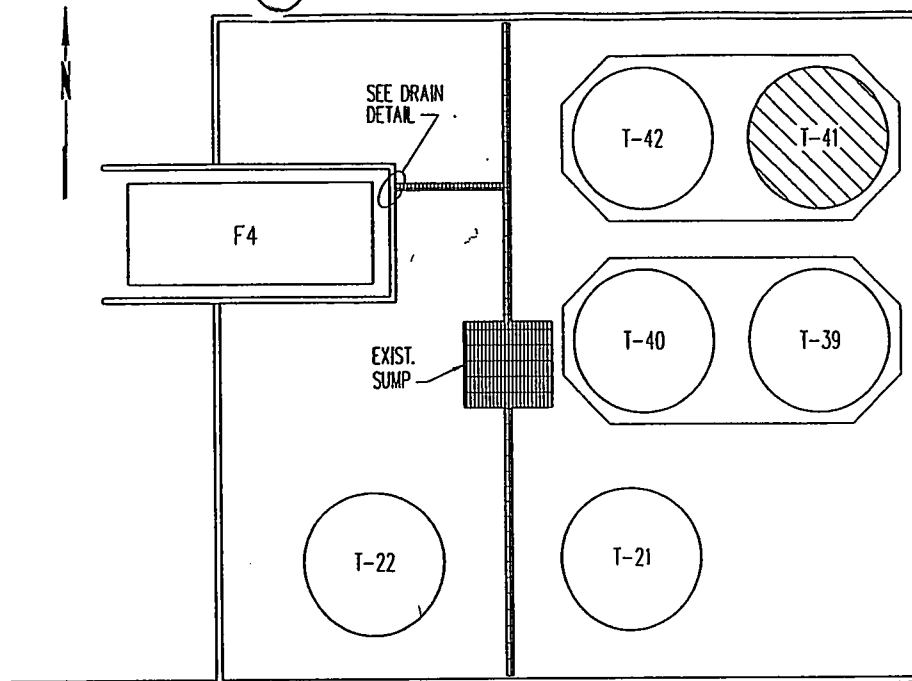
LARGEST TANK CAPACITY = 20,305 GAL. (T-42)

25 YEAR, 24 HR. RAINFALL

0.825 x 3101 = 2558 FT<sup>3</sup> x 7.481 = 19,136 GAL.  
= 39,441 GAL. (REQUIRED)

## ADDITIONAL CAPACITY

56,915 GAL. (AVAILABLE)  
- 39,441 GAL. (REQUIRED)  
17,474 GAL. ADDITIONAL CAPACITY



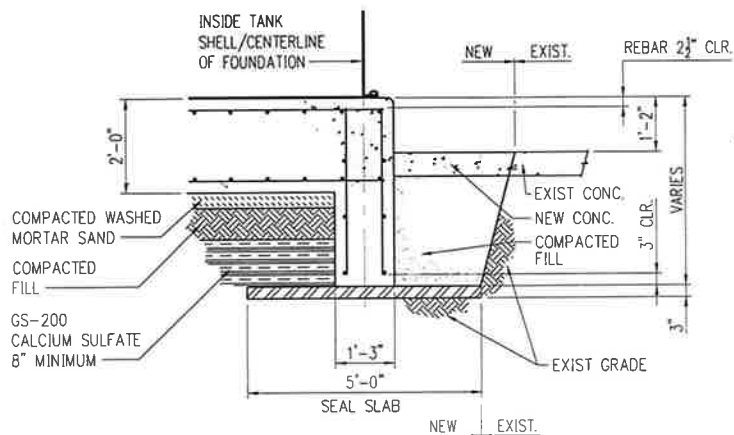
CEA-00-N/A

No.	Revision	Date	By	App.	Name:	Date:
				Drawn	J.M.	02/07/01
				Approv. by	P.SMOLEN	
				Engineer/Design Co.	HEM DESIGN, INC.	
1	REVISED CONTAINMENT FOR 3'-0" TALL CONTAINMENT WALL	SEP 2002	TEH		8602 SPENCER HWY., LA PORTE, TEXAS 77571 PH # (281) 830-4750	
0	ISSUED FOR CONSTRUCTION	DEC 5 2001	J.M.		CAD Name	05-10-0006 REV0.DWG
A	ISSUED FOR REVIEW	11/8 / 2001	J.M.		Scale:	3/32"=1'-0"

**Vopak**  
INDUSTRIAL SERVICES

2759 Battleground Road  
Deer Park, Texas 77536  
(281) 604-6150

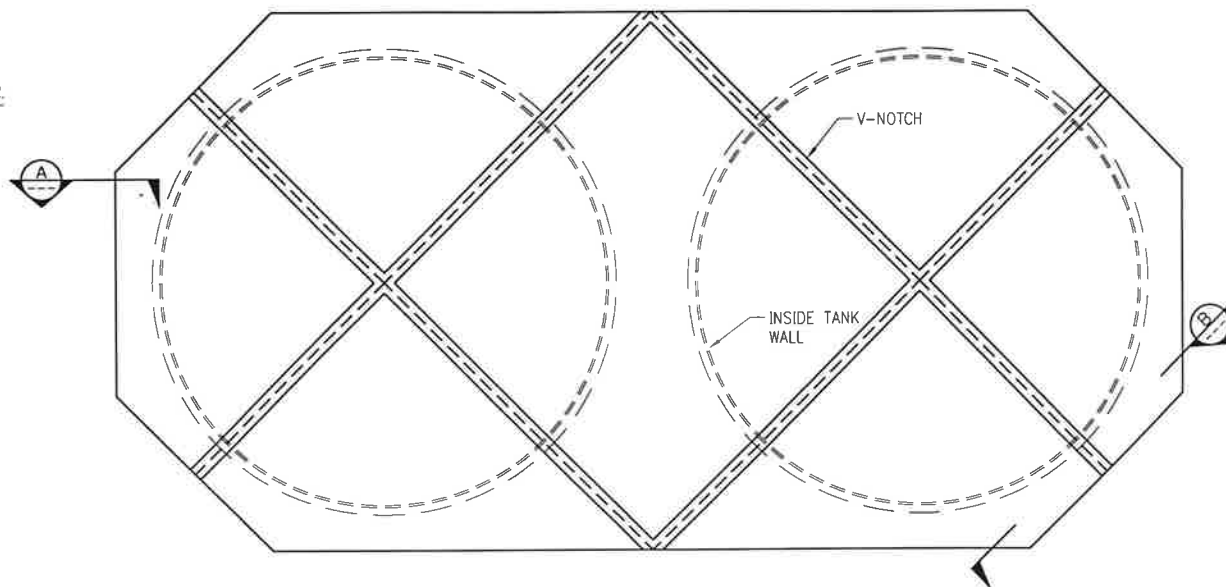
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SECONDARY CONTAINMENT - TANK 05-T-41				
FUELS				
NOR #85				
Sheet Size:	Location:	Job #:	Drawing Number:	Rev. #
B		760-EM	05-10-0006	1



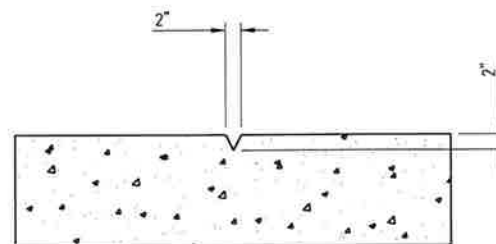
SECTION "A-A"

# GENERAL CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL CONFORM TO THE JOB SPECIFICATIONS, ACI-318 LATEST EDITION.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.
3. ALL REINFORCING BARS SHALL BE NEW, CLEAN, GRADE 60, BILLET-STEEL AS PER ASTM DESIGNATION A-615.
4. ALL REINFORCING BARS SHALL BE DETAILED AND PLACED AS PER ACI MANUALS 315 AND 318 LATEST EDITION.
5. ALL ANCHOR BOLTS SHALL CONFORM TO ASTM DESIGNATION A-307, UNLESS NOTED, AND SHALL BE GALVANIZED AS PER ASTM A-153.
6. ALL EXPOSED CONCRETE AND GROUT CORNERS AND EDGES SHALL BE CHAMFERED 3/4" UNLESS NOTED OTHERWISE.
7. CONSTRUCTION JOINTS BETWEEN NEW AND HARDENED CONCRETE SHALL BE CLEAN, FREE OF LAITANCE AND INTENTIONALLY ROUGHENED TO A FULL AMPLITUDE OF 1/4" INCH.
8. ALL EXPOSED CONCRETE TO BE SEALED WITH EPOXY NOVOLAC, VINYL ESTER OR EQUIVALENT.



PLAN  
V-NOTCH DETECTION DESIGN



SECTION "B-B"



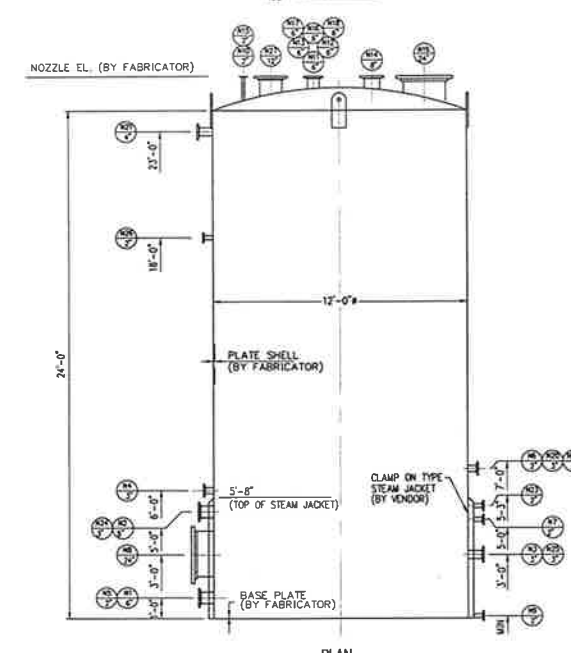
10-24-01  
CEA-00-N/A

No.	Revision	Date	By	App.	Name:	Date:
				Drawn	J.M.	06/14/00
				Approv. by	P.SMOLEN	
				Engineer/Design Co.	H&M DESIGN	
0	ISSUED FOR CONSTRUCTION	11/27/2001	J.M.	CAD Name	05-50-0005 REV0.DWG	
A	ISSUED FOR APPROVAL	11/27/2001	J.M.	Scale:	N.T.S.	



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INDUSTRIAL SERVICES

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Deer Park, Texas 77536  
(281) 604-6150

REPORTS FOR RCRA PART "B"				
FOUNDATION SECTIONS - TANK 05-T-41				
FUELS				
NOR #85				
Sheet Size:	Location:	Job #:	Drawing Number:	Rev. #
B		760-EM	05-50-0005	0



1. VESSEL TO BE FABRICATED OR PURCHASED USED.  
ANY MODIFICATIONS TO A USED VESSEL TO BE PER  
API-650.

 <b>Vopak</b> INDUSTRIAL SERVICES		2759 Battleground Road Deer Park, Texas 77336 (201) 604-6180	
ENGINEER	 <b>H &amp; M DESIGN, INC.</b> 8832 SPRINGER RD. LA PORTE, TEXAS 77571	P.O. BOX 8750 FT. WORTH, TX 76187-0850 E-MAIL: hmvtdesign@hmc.com	
DRAWN BY	CJC	DATE	11/00
CHECKED BY		PROJ. ENG.	
H&M JOB #1	102124	VOPAK ENG.	P. MOLEN
		SCALE	NONE
		ENGINEER JOB NO.	-PD

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25 YEAR, 24 HR. RAINFALL

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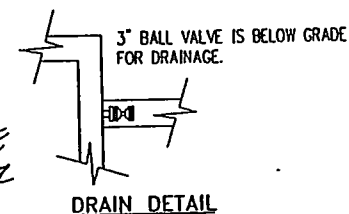
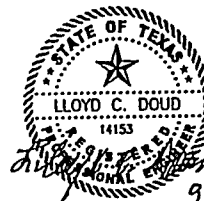
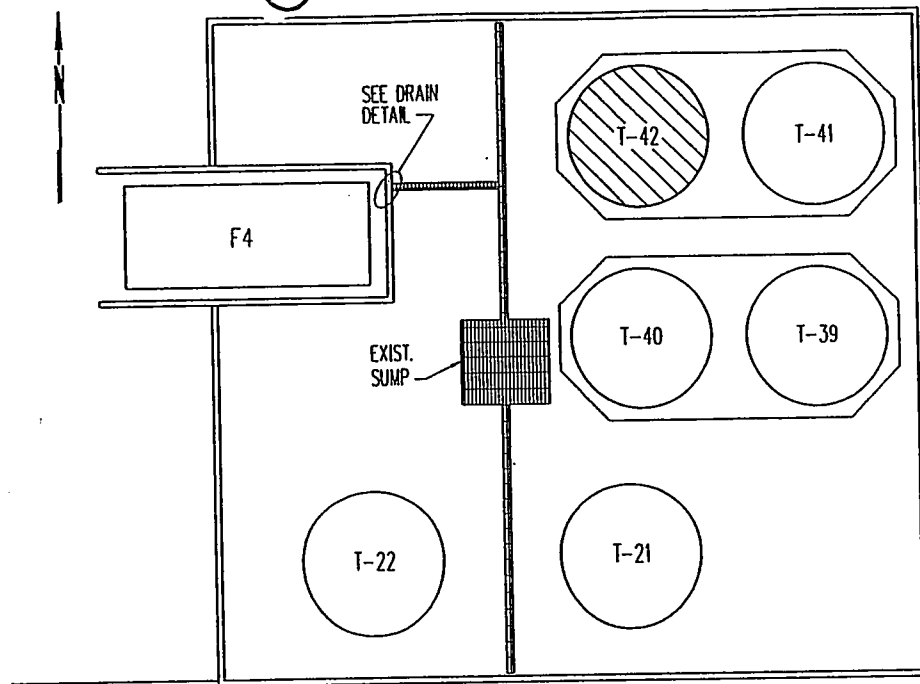
= 39,441 GAL. (REQUIRED)

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- 39,441 GAL. (REQUIRED)

17,474 GAL. ADDITIONAL CAPACITY



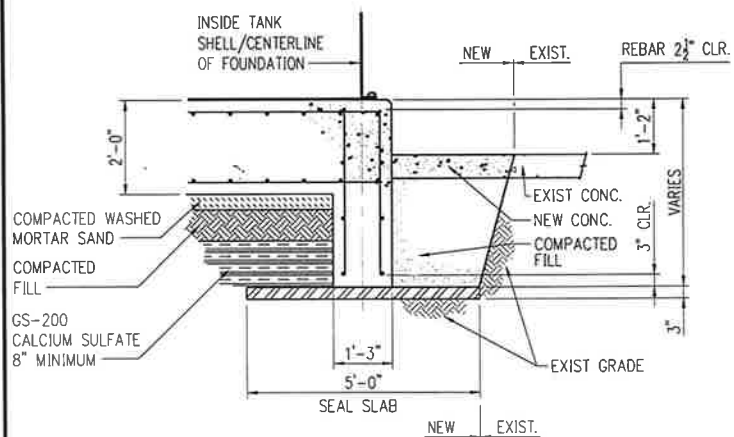
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No.	Revision	Date	By	App.	Name:	Date:
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				Approv. by	P.SMOLEN	
				Engineer/Design Co.	HAU DESIGN, INC. 8402 SPENCER HWY. LA PORTE, TEXAS 77571 PH / (281) 935-8750	
1	REVISED CONTAINMENT FOR 3'-0" TALL CONTAINMENT WALL	SEP 2002	TEH			
0	ISSUED FOR CONSTRUCTION	OCT 5 2001	J.M.		CAD Name	05-10-0007 REVO.DWG
A	ISSUED FOR REVIEW	NOV 7 2001	J.M.		Scale:	3/32"=1'-0"

**Vopak**  
 INDUSTRIAL SERVICES

2759 Bottleground Road  
 Deer Park, Texas 77536  
 (281) 604-6150

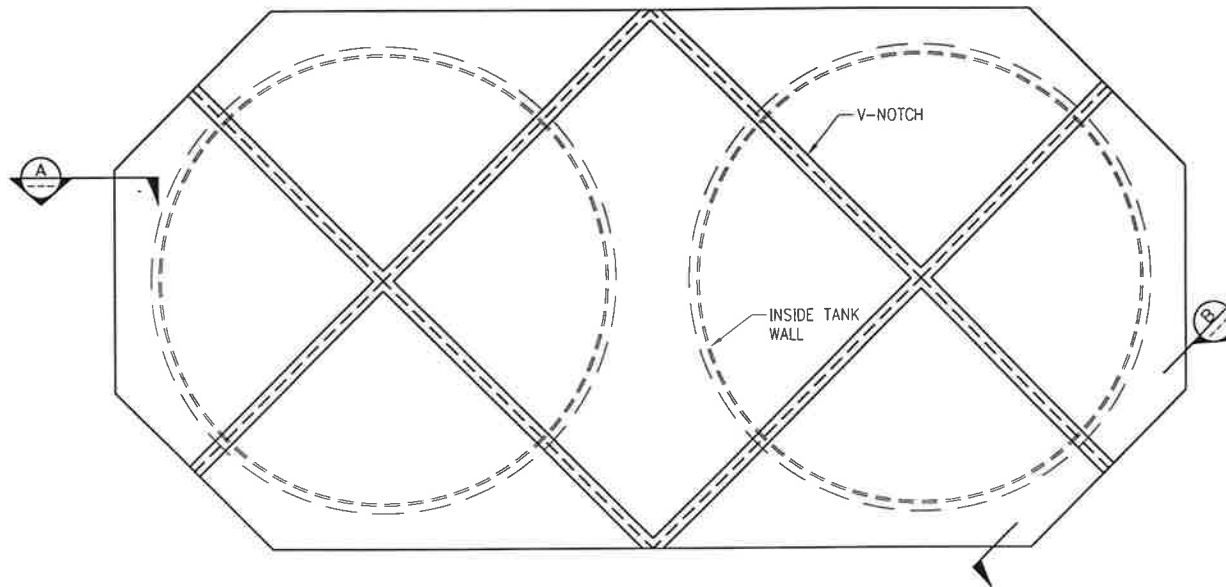
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FUELS				
NOR #86				
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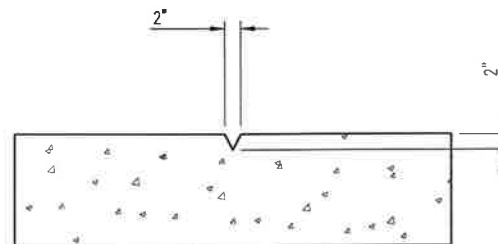
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PLAN  
V-NOTCH DETECTION DESIGN



SECTION "B-B"



10-24-04  
CEA-00-N/A

No.	Revision	Date	By	App.	Name:	Date:
					J.M.	06/14/00
					P.SMOLEN	
					Engineer/Design Co.	
0	ISSUED FOR CONSTRUCTION	11-23-00	J.M.		CAD Name	05-50-0006 REV0.DWG
A	ISSUED FOR REVIEW	11-27-00	J.M.		Scale:	N.T.S.

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Deer Park, Texas 77536  
(281) 604-6150

REPORTS FOR RCRA PART "B"					
FOUNDATION SECTIONS - TANK 05-T-42					
FUELS					
NOR #86					
Sheet Size:	Location:	Job #:	Drawing Number:	Rev. #	
B		760-EM	05-50-0006	0	



**ATTACHMENT II**  
**LIST OF AUTHORIZED WASTES**

Authorized wastes for Tank 05-T-41 and 05-T-42 per Permit No. HW-50025:

<b>Waste</b>	<b>Source</b>	<b>TNRCC Waste Classification</b>	<b>Hazard Code</b>
Railcar Washwater	Generated	H, 1, 2	I,T,C,H,E,R
Railcar Heel Solids - Organic	Generated	H, 1, 2	I,T,C,H,E,R
Railcar Heel Liquids - Organic	Generated	H, 1, 2	I,T,C,H,E,R
Spent Fuels	Generated	H, 1, 2	I,T,C,H,E,R
Railcar Heel Solids - Inorganic	Generated	H, 1, 2	I,T,C,H,E,R
Railcar Heel Liquids - Inorganic	Generated	H, 1, 2	I,T,C,H,E,R
Ignitable Solvent	Generated	H, 1, 2	I,T,C,H,E,R
Acidic Aqueous Waste	Generated	H, 1, 2	I,T,C,H,E,R
Aqueous Waste - Low Solvents	Generated	H, 1, 2	I,T,C,H,E,R
Aqueous Waste - High Dissolved Solids	Generated	H, 1, 2	I,T,C,H,E,R
Mercury Contaminated Waste	Generated	H, 1, 2	I,T,C,H,E,R
Caustic Aqueous Waste	Generated	H, 1, 2	I,T,C,H,E,R
Organic Sludge	Generated	H, 1, 2	I,T,C,H,E,R
Inorganic Sludge	Generated	H, 1, 2	I,T,C,H,E,R
Liquid Organic Wastes	Generated	H, 1, 2	I,T,C,H,E,R
Inorganic Salt	Generated	H, 1, 2	I,T,C,H,E,R
Washwaters with Low Organics	Generated	H, 1, 2	I,T,C,H,E,R
Contaminated Stormwater	Generated	H, 1, 2	I,T,C,H,E,R
Inorganic Ignitable or Acidic Aqueous Waste	Generated	H, 1, 2	I,T,C,H,E,R
Organic Ignitable or Acidic Aqueous Waste	Generated	H, 1, 2	I,T,C,H,E,R
Pesticide Waste	Received	H, 1, 2	I,T,C,H,E,R
Metallic Waste	Received	H, 1, 2	I,T,C,H,E,R
Caustic Waste	Received	H, 1, 2	I,T,C,H,E,R
Neutralized Spent Acids	Received	H, 1, 2	I,T,C,H,E,R
Organic Waste	Received	H, 1, 2	I,T,C,H,E,R
Inorganic Waste	Received	H, 1, 2	I,T,C,H,E,R
Waste Oils and Solvents	Received	H, 1, 2	I,T,C,H,E,R
Aqueous Waste	Received	H, 1, 2	I,T,C,H,E,R
Washwater (including Railcar, Tank Truck, and Tanks washwater)	Received	H, 1, 2	I,T,C,H,E,R
Contaminated Stormwater	Received	H, 1, 2	I,T,C,H,E,R
Sludges	Received	H, 1, 2	I,T,C,H,E,R
Off-Spec Products Discarded as Waste	Received	H, 1, 2	I,T,C,H,E,R



**ATTACHMENT III**  
**INSPECTION FORMS**

**H&M Design, Inc.**

**Containment System Design Assessment**

The design assessment for the existing secondary containment system where 05-T-40 & 05-T-41 waste tanks will be installed was completed on April 15, 2001. This system will be inspected per the attached checklist, and approved by an independent professional engineer registered in the State of Texas.

A reinforced diked area immediately surrounding the tank provides secondary Containment. This area also provides secondary containment for all ancillary equipment located at the tank site. This diked area serves as an external liner between the tank system and the ground. The lined concrete surfaces are compatible with the wastes stored and will prevent migration through the surface to the ground.

The containment area is sloped so that any spilled waste or rainwater enters the trench and/or sump. The sump and trench are also constructed of reinforced concrete with an epoxy novolac, vinyl ester or equivalent liner. The trench penetrates the containment area through an isolation block valve that will be kept closed at all times. Any accumulated wastes and or rainfall can be pumped back into a compatible RCRA approved tank within the system.

This containment area has a volume of 75,887 gallons which is well in excess of the largest tank capacity of 20,305 gallons, and also provides adequate storage capacity for a 25 year, 24 hour rainfall event of approximately 9.9 inches (Attachment I). This leaves a resultant of approximately 36,446 gallons in additional capacity.

All seams, joints, and cracks are caulked and sealed with an epoxy type joint material that is compatible with the waste materials stored in this tank.

The reinforced concrete structure provides sufficient strength for expected pressure gradients, climatic conditions, and stress of daily operations.

Any leaks or spills into the containment area will be visible immediately, so leak detection is provided by continuous visual inspections by operations as well as daily close-up walk thru inspections. Unit operators, as required, will document any leak, spill, or other concerns.



Larry Hogan  
H&M Design, Inc.

**H&M DESIGN, INC.**

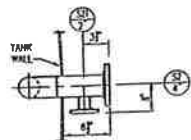
**HAZARDOUS WASTE STORAGE TANK ASSESSMENTS**

**EXTERNAL INSPECTION CHECKLIST**

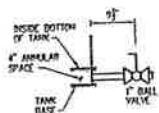
**Tank No.** \_\_\_\_\_

_____	Loss of resin thickness/ Shell thickness
_____	Cracks and leaks at welds
_____	Cracks at nozzle connections
_____	Cracks and leaks at seams
_____	Cracking at plate joints
_____	Corrosion pits
_____	Hammer testing
_____	Vent condition for blockage
_____	Valve stem and flange connections
_____	Open ended lines
_____	Pump seals
_____	Hydro Test documentation
_____	Vent size
_____	Conformance with Application Codes
_____	Any modifications since last assessment
	Comments:

\_\_\_\_\_  
Signature




**"S2" DETAIL**

[illegible]

P.E  
9-19-02

CEA-0


Drawing Number  
05 60 T 583-1



**Vopak**  
INDUSTRIAL SERVICES

2725 Billingsmead Road  
Dear Park, Texas 77238  
(281) 801-8150

**ENGINEER**



**H & H DESIGN, INC.**  
8002 SPOONER HWY.  
LA PORTE, TEXAS 77571

**PH** # (281) 800-8750  
**FAX** # (281) 800-8713  
**E-MAIL:** [info@hnhdesign.com](mailto:info@hnhdesign.com)

**PROJECT: KENOS**

**DRAWN BY:** JUNE  
**CHECKED BY:** RYAN  
**WEEK JOB #:** 144444

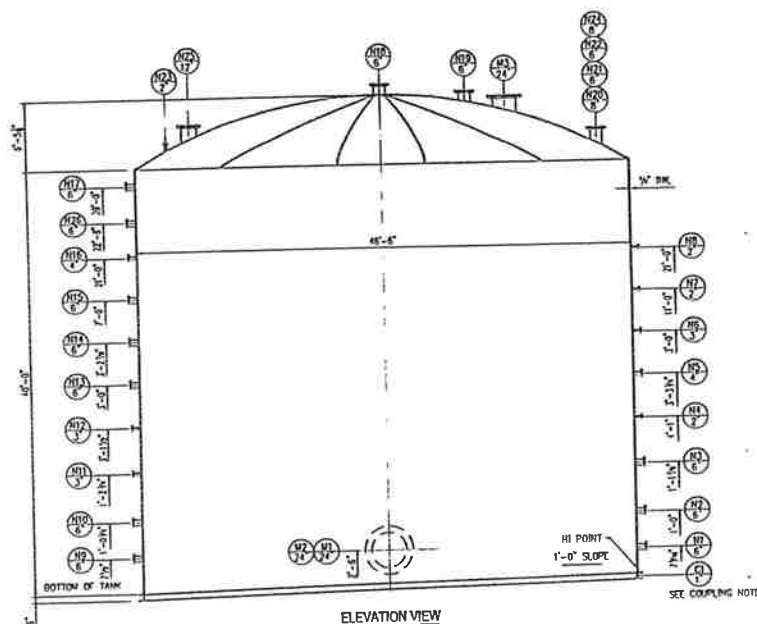
**DATE REVISED:**  
**JOHN EMMERT**  
**PAM EMMERT**  
**ENGINEER JOHN EMM.**

**SCALE:**  
**N.T.S.**  
**JO**

2758 Bollingwood Road  
Oscar Park, Texas 77538  
(281) 804-8130

PM # (781) 920-8720  
FAX # (781) 920-8711  
E-mail: [info@hondapdf.com](mailto:info@hondapdf.com)

PROJ. ENG.	
VOPAR ENG.	SCALE:
PAM SMOUEN	N.T.



### MATERIALS OF CONSTRUCTION

MULTI-CHOICE OF "NONE OF THE ABOVE"			
	VERTELL OR IN-CELL ADOPT		JACKET OR TUNE UP
IN-CELL	A36	1	
HEADS	A37	2	
FLAMES	#105	3	
MOBILE MOON	A38	4	
VEGETE, IN-CELL		5	
EXTERNAL	A39 A37	6	
EXTERNAL	A40 A37	7	
CLARIFIED		8	

## DESIGN CONDITIONS

[illegible]

## CAPACITIES AND WEIGHTS

OPERATING EXP.		50.00	100.00
FIXED CHARGES			100.00
DEBT SERVICE			100.00
OPERATING WEIGHT			100.00

NOZZLE SCHEDULE

NAME	NO	NO2	DATE	TIME	PROG	TIME	LOC	S.3	PROG	TYPE	SERVICE
0401	1	1	1966	07	0000	00	1	1	1	1	1
0402	1	1	1966	07	0000	00	1	1	1	1	1
0403	1	1	1966	07	0000	00	1	1	1	1	1
0404	1	1	1966	07	0000	00	1	1	1	1	1
0405	1	1	1966	07	0000	00	1	1	1	1	1
0406	1	1	1966	07	0000	00	1	1	1	1	1
0407	1	1	1966	07	0000	00	1	1	1	1	1
0408	1	1	1966	07	0000	00	1	1	1	1	1
0409	1	1	1966	07	0000	00	1	1	1	1	1
0410	1	1	1966	07	0000	00	1	1	1	1	1
0411	1	1	1966	07	0000	00	1	1	1	1	1
0412	1	1	1966	07	0000	00	1	1	1	1	1
0413	1	1	1966	07	0000	00	1	1	1	1	1
0414	1	1	1966	07	0000	00	1	1	1	1	1
0415	1	1	1966	07	0000	00	1	1	1	1	1
0416	1	1	1966	07	0000	00	1	1	1	1	1
0417	1	1	1966	07	0000	00	1	1	1	1	1
0418	1	1	1966	07	0000	00	1	1	1	1	1
0419	1	1	1966	07	0000	00	1	1	1	1	1
0420	1	1	1966	07	0000	00	1	1	1	1	1
0421	1	1	1966	07	0000	00	1	1	1	1	1
0422	1	1	1966	07	0000	00	1	1	1	1	1
0423	1	1	1966	07	0000	00	1	1	1	1	1
0424	1	1	1966	07	0000	00	1	1	1	1	1
0425	1	1	1966	07	0000	00	1	1	1	1	1
0426	1	1	1966	07	0000	00	1	1	1	1	1
0427	1	1	1966	07	0000	00	1	1	1	1	1
0428	1	1	1966	07	0000	00	1	1	1	1	1
0429	1	1	1966	07	0000	00	1	1	1	1	1
0430	1	1	1966	07	0000	00	1	1	1	1	1
0431	1	1	1966	07	0000	00	1	1	1	1	1
0432	1	1	1966	07	0000	00	1	1	1	1	1
0433	1	1	1966	07	0000	00	1	1	1	1	1
0434	1	1	1966	07	0000	00	1	1	1	1	1
0435	1	1	1966	07	0000	00	1	1	1	1	1
0436	1	1	1966	07	0000	00	1	1	1	1	1
0437	1	1	1966	07	0000	00	1	1	1	1	1
0438	1	1	1966	07	0000	00	1	1	1	1	1
0439	1	1	1966	07	0000	00	1	1	1	1	1
04											

## GENERAL NOTES

- [illegible]

## VOPAK REFERENCE DATA



PERSON ORDER IN	PERSON	PERSON ORDER DATE	PERSON
PERSON ORDER IN	PERSON	PERSON ORDER DATE	PERSON
PERSON ORDER IN	PERSON	PERSON ORDER DATE	PERSON

## MANUFACTURER DATA

BIRTH DATE: PASADENA TOWNSHIP CORPORATION  
 STREET 1 P.O. BOX 13813 JACINTO, CA 92531  
 CITY: JACINTO STATE: TEXAS ZIP: 77001  
 TELEPHONE (409) (281) 431-3000 FAX: (409) 431-3700  
 TELETYPE CONTRACT  
 BIRTH DATE: P.O. BOX 22000 IN CHARGE OF: [ ]  
 BIRTH DATE: [ ]

CEA-01-

[illegible]

 <b>Vopak</b> <b>INDUSTRIAL SERVICES</b>		2738 Bollingwood Road Dover, Texas 77834 (201) 804-8150	
ENGINEER	 ICM INCH MARKING	H & H DESIGN, INC. 8005 SPENCER JAY LA PORTE, TEXAS 77571	
DRAWN BY JMS	DATE 01/01/01	P.O. J. LHM-3 VOPAK ENRS P. SMOEN ENGINEER JOE HOK	
CHECKED BY HAW JOE #1		SCALES NTA	

REPLACE 05-T-589

05-T-589 TANK DRAWING

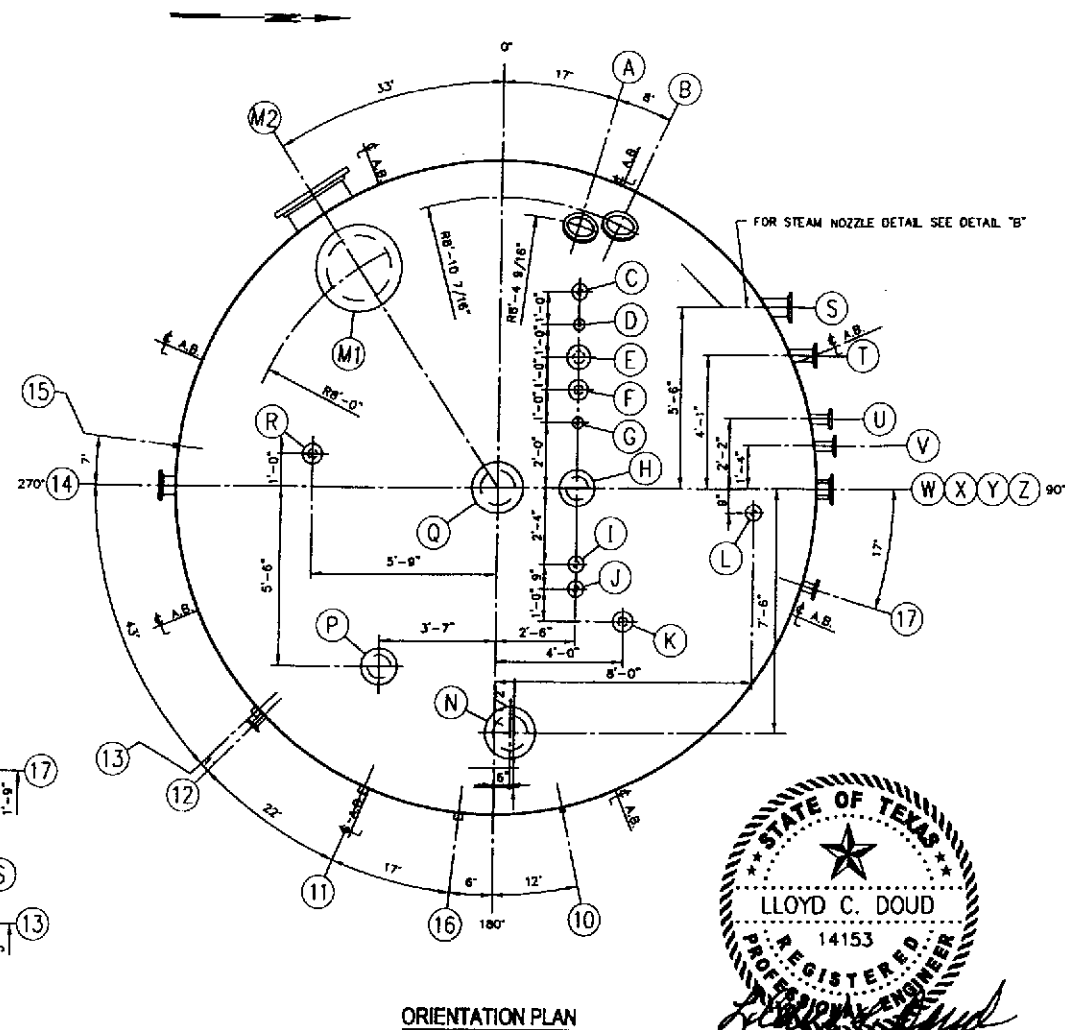
STORAGE/PRETREATMENT

NOR#56

Shl. class:	Acad. File Number	Division Number
D	05-60-T-589-1-rev1	05-60-T-589-1



AS BUILTS			
05-T-591 - PLAN AND ELEVATION			
PROCESS HOLDING/PRETREATMENT			
NOR# 58			
SPIN/COPIES	APPROVED FOR	DISSEMINATION	REL.
D	05-60-T-591-1 REV0.dwg	05-60-T-591-1	0



INS. CO.		MFR. DWG. NO.		REV.
REPORTS FOR RCRA PART "B"				
TANK 05-T-1B - PLAN AND ELEVATION				
PROCESS HOLDING/PRETREATMENT				
NOR #22				
Sht. size:	ACad File Name:	Drawing Number:	Rev.	
D	05-60-T-01B-1-REV1.DWG	05-60-T-1B-1	1	



# AVAILABLE CONTAINMENT

GROSS CONTAINMENT AREA = 14,957 FT<sup>2</sup>

LESS AREA FOR:

T-1A AREA = 284 FT<sup>2</sup>  
T-1B AREA = 314 FT<sup>2</sup>  
T-3 AREA = 113 FT<sup>2</sup>  
T-4A AREA = 177 FT<sup>2</sup>  
T-4B AREA = 177 FT<sup>2</sup>  
T-8 AREA = 113 FT<sup>2</sup>  
T-9A AREA = 202 FT<sup>2</sup>  
T-9B AREA = 177 FT<sup>2</sup>

T-43 AREA = 113 FT<sup>2</sup>  
T-44 AREA = 28 FT<sup>2</sup>  
T-48 AREA = 28 FT<sup>2</sup>  
T-49 AREA = 50 FT<sup>2</sup>  
C-2 AREA = 20 FT<sup>2</sup>  
C-3 AREA = 20 FT<sup>2</sup>  
C-4 AREA = 3 FT<sup>2</sup>

NET AREA = 13,138 FT<sup>2</sup> = A

A x H = V

7.481 GAL. = 1 FT<sup>3</sup>

EXISTING CONTAINMENT CAPACITY:

13,138 FT<sup>2</sup>(A) x 3.47 FT (H) = 45,589 FT<sup>3</sup>(V) x 7.481 GAL/FT<sup>3</sup>  
= 341,050 GAL. (AVAILABLE)

# CONTAINMENT REQUIRED

LARGEST TANK CAPACITY

= 200,000 GAL. (T-5)

25 YEAR, 24 HR. RAINFALL (SEE NOTE)

0.825 FT x 14,957 FT<sup>2</sup> = 12,340 FT<sup>3</sup> x 7.481 GAL/FT<sup>3</sup> = 92,312 GAL.

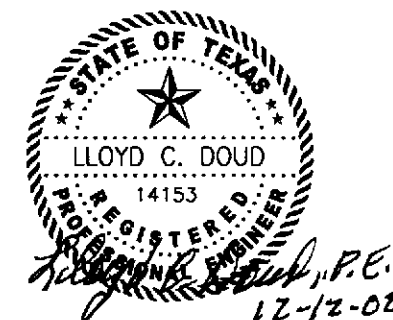
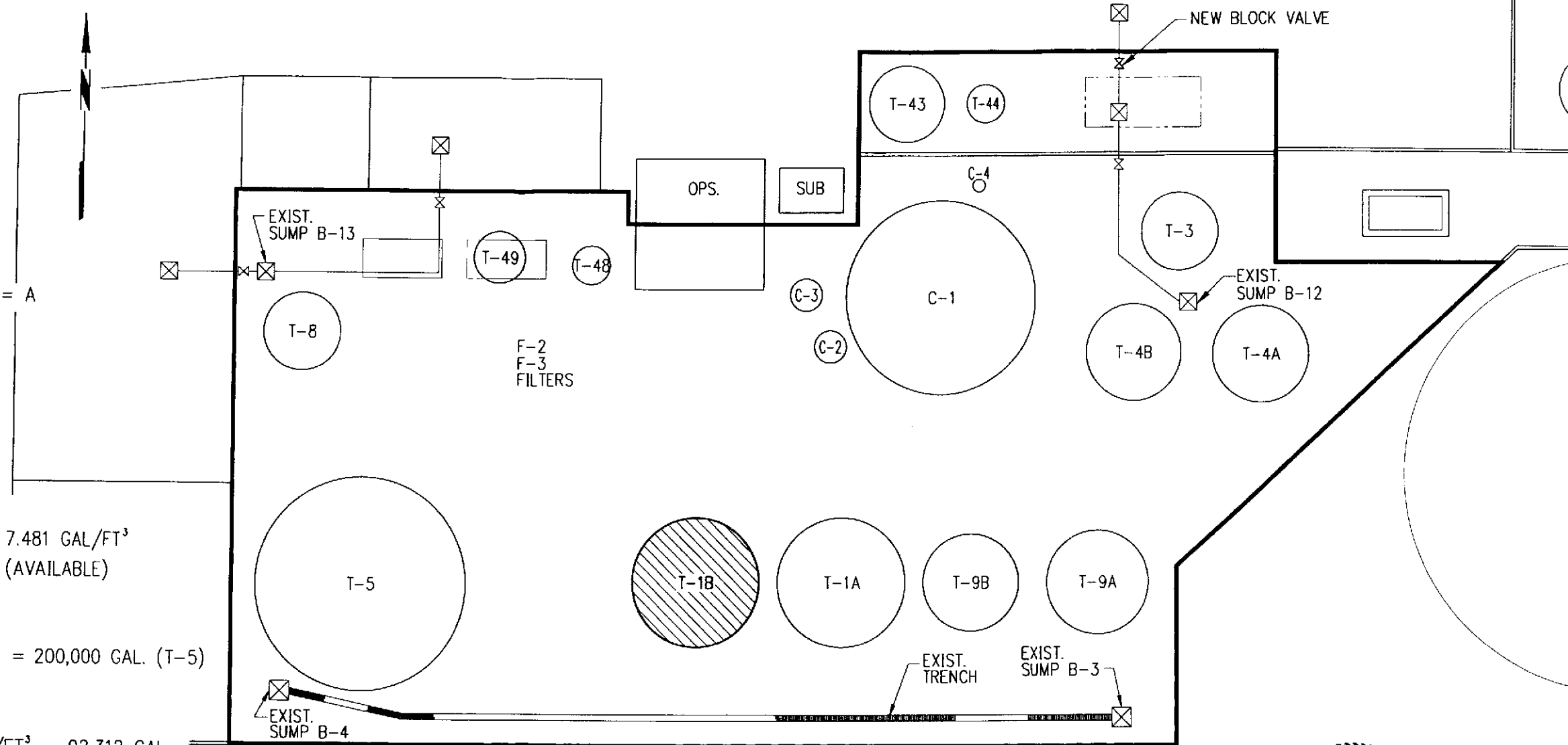
= 292,312 GAL. (REQUIRED)

# ADDITIONAL CAPACITY

341,050 GAL. (AVAILABLE)

- 292,312 GAL. (REQUIRED)

48,738 GAL. ADDITIONAL CAPACITY



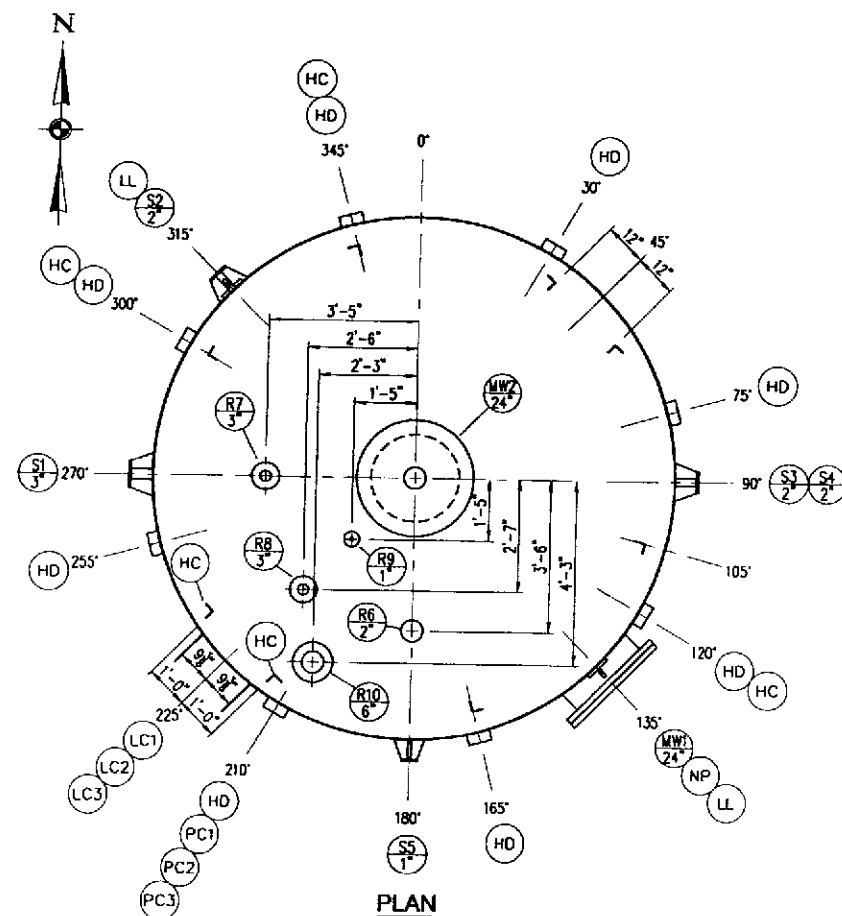
# NOTE:

24 YEAR/24 HOUR RAIN FALL AMOUNT OF 0.825 FT IS BASED ON DOCUMENTATION RECEIVED FROM HARRIS COUNTY OFFICE OF EMERGENCY MANAGEMENT TABLE "D-4".

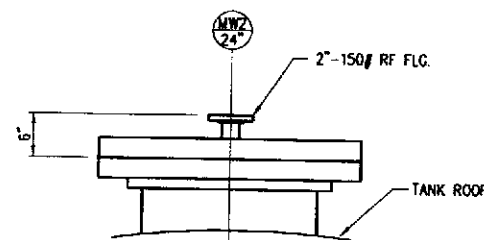
No.	Revision	Date	By	App.	Name:	Date:	REPORTS FOR RCRA PART "B"			
					Drawn	J.M.	SECONDARY CONTAINMENT - TANK 05-T-1B			
					Approv. by	P.SMOLEN	PROCESS HOLD/PRETREATMENT			
1	REVISED FORMAT & RAINFALL AMOUNT	DEC 11 2002	J.M.	P.S.	Engineer/Design Co.	H&M DESIGN, INC. 8502 SPENCER HWY. LA PORTE, TEXAS 77571 PH # (281) 930-8750	NOR #22			
0	ISSUED FOR CONSTRUCTION	MAR 2000	J.M.		CAD Name	05-10-0001-rev1.DWG	Sheet Size:	Location:	Job #:	Drawing Number:
B	ISSUED FOR APPROVAL	MAR 28 2000	J.M.		Scale:	1"=20.0'	B	DEER PARK	1208-VI	05-10-0001
A	ISSUED FOR APPROVAL	JAN 12 2000	J.M.							Rev. #
										1

**Vopak**  
INDUSTRIAL SERVICES

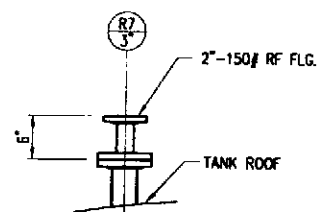
2759 Battleground Road  
Deer Park, Texas 77536  
(281) 604-6150



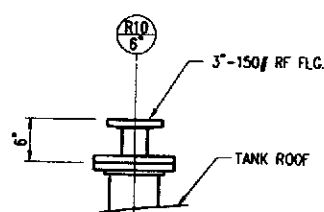
PLAN



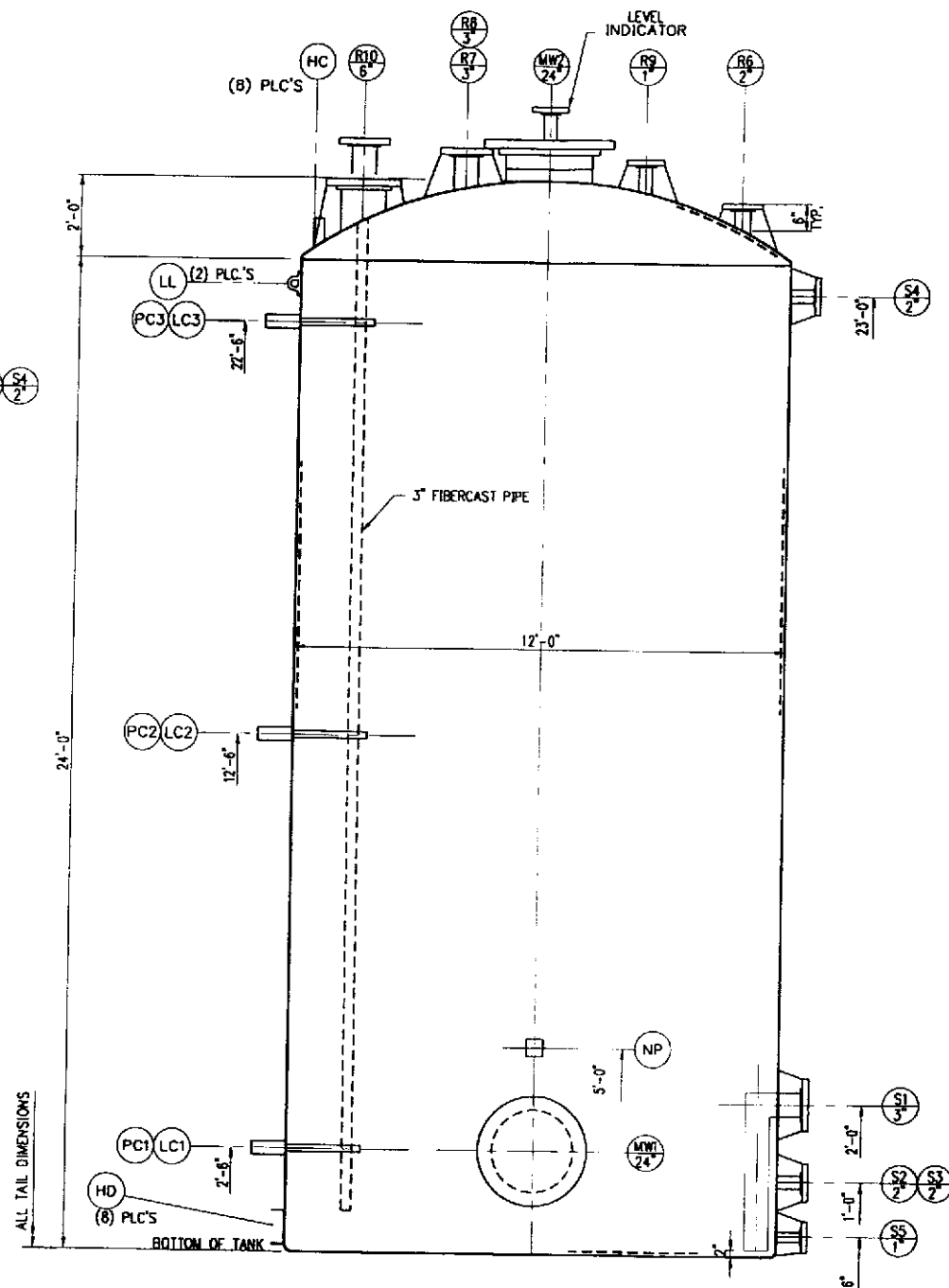
MW2 DETAIL



"R7" DETAIL



"R10" DETAIL



ELEVATION

VESSEL		VOPAK DEER PARK, TX		NATIONAL BOARD No.	
EQUIP. MFR. DIAMOND FIBERGLASS FABRICATORS, INC.	P.O. No. E-4198	ORDER DATE	YEAR BUILT 1988		
VOPAK ASSET No.	MAX. DESIGN (PSIG & °F)	VESSEL PRESS. TEMP.	JACKET / COIL PRESS. TEMP.		
VOPAK INSP. STAMP	MATLS. OF CONST.	METRON 822			
ORIG. NOM. THICK.	MIN. ALLOW. THICK.	TOTAL CAPACITY	20,000 GAL.		
SPECIAL NOTES					
SHELL		W.S. CO.			
TOP HEAD					
BTM HEAD					

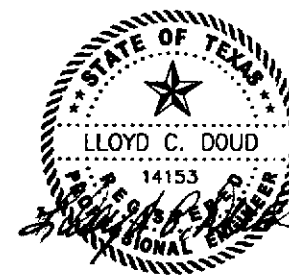
MATERIALS OF CONSTRUCTION	
RESIN CORROSION LINER:	METRON 822 VINYL ESTER
CORROSION LINER THICKNESS:	100 MILS NOMINAL
INTERIOR SURFACING VEL:	SINGLE PLY NEXUS
RESIN, STRUCTURAL:	METRON 822 VINYL ESTER
EXTERIOR GELCOAT:	LIGHT GRAY
DOME THICKNESS:	275" w/ .375" KNUCKLE
FLAT END THICKNESS:	275" w/ .375" KNUCKLE
EXTERNAL NOZZLE PROJECTION:	6" FROM O.D.
INTERNAL NOZZLE PROJECTION:	2" FROM I.D.
BOLT MATERIAL:	304 STAINLESS STEEL
GASKET MATERIAL:	1/8" NEOPRENE
POST CURE REQD:	NO
HYDROTEST REQD:	NO

DESIGN CONDITIONS	
DESIGN PRESS.	ATM
DESIGN TEMP.	100°F
OPERATING PRESS.	ATM
OPERATING TEMP.	AM
TEMP. ALLOWED	
CODE	ASME B31.2, ASME 409.7 & PS-1-88
CODE STAMP	N/A
STRESS STAMP	N/A
STRESS RELIEF	N/A
WELDING	N/A
JOINTS	N/A
HYDROTEST	N/A
SP. GR. CONTENTS	1.4

CAPACITIES AND WEIGHTS		
OPERATING CAP.	20,000 GAL.	CU. FT.
FULL CAPACITY	20,000 GAL.	CU. FT.
EMPTY WEIGHT	4,100 LBS.	LBS.
OPERATING WEIGHT	241,161 LBS.	LBS.

NOZZLE SCHEDULE									
MARK	No.	SIZE	RATING	FACING	T"	O.S. PROJ.	TYPE	SERVICE	
Δ	S1	1"	150	FF	6"			INLET LINE	
Δ	S2	1"	150	FF	6"			SUCTION LINE	
Δ	S3	1"	150	FF	6"			SAMPLE VALVE	
Δ	S4	1"	150	FF	6"			SPARE W/BLIND FLC.	
Δ	S5	1"	150	FF	6"			DRAIN	
Δ	R8	1"	150	FF	6"			VAPOR CONTROL	
Δ	R7	1"	150	FF	6"			VENT	
Δ	R9	1"	150	FF	6"			BLIND	
Δ	R10	1"	150	FF	6"			HI LEVEL	
Δ	R10	1"	150	FF	6"			W/2" DOWN PIPE - DIP TUBE	
Δ	MW1	1"	150	FF	6"			MANWAY SIDE	
Δ	MW2	1"	150	FF	6"			MANWAY W/ LEVEL INDICATOR	
Δ	LC1							LADDER CLIP	
Δ	LC2							LADDER CLIP	
Δ	LC3							LADDER CLIP	
Δ	PC1							PIPE CLIP	
Δ	PC2							PIPE CLIP	
Δ	PC3							PIPE CLIP	
Δ	HD							HOLD DOWN	
Δ	LL							LIFTING LUG	
Δ	NP							NAME PLATE	
Δ	HC							HAND RAIL CLIP	

LEGEND:  
 Δ CONICAL GUSSET  
 + PLATE GUSSET  
 O NON-GUSSETED



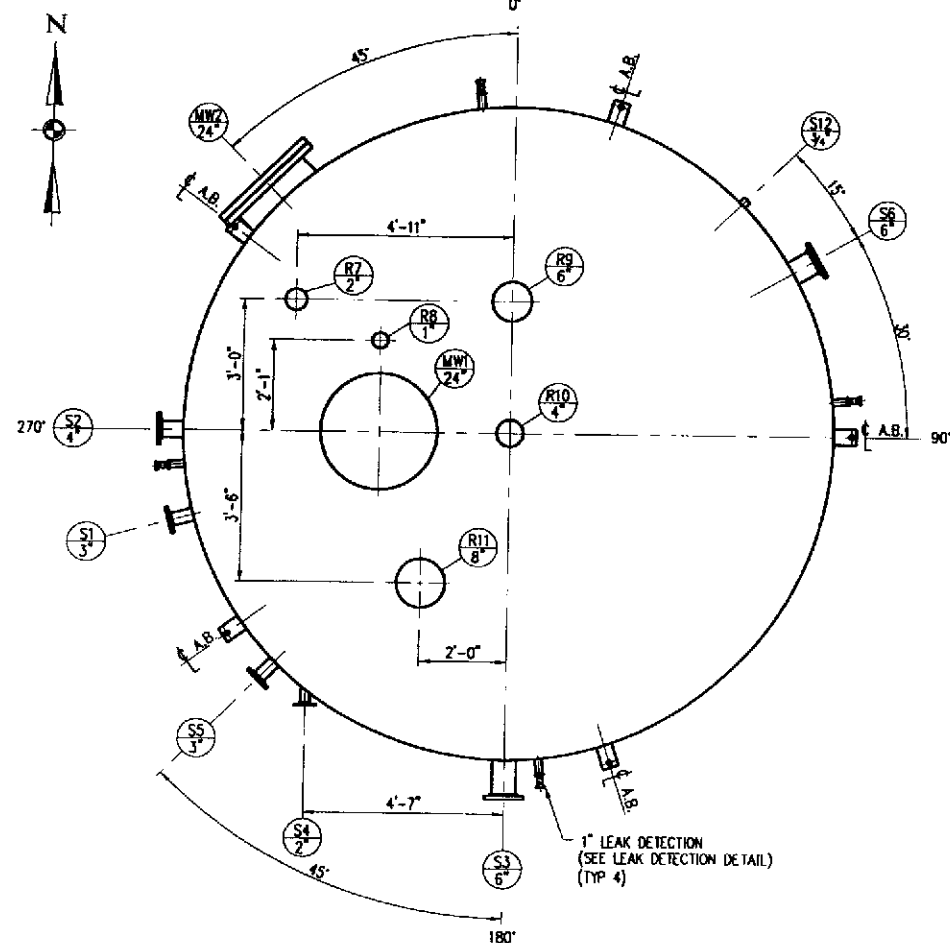
This Seal dated 9-19-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

NOTE:  
 THIS DRAWING REDRAWN FROM EXISTING DIAMOND FIBERGLASS FABRICATORS INC. HCI STORAGE TANK DRAWING NO. IND1289. MATL. OF CONSTRUCTION & DESIGN CONDITIONS ARE REFERENCED FROM THIS DRAWING & NAME PLATE.

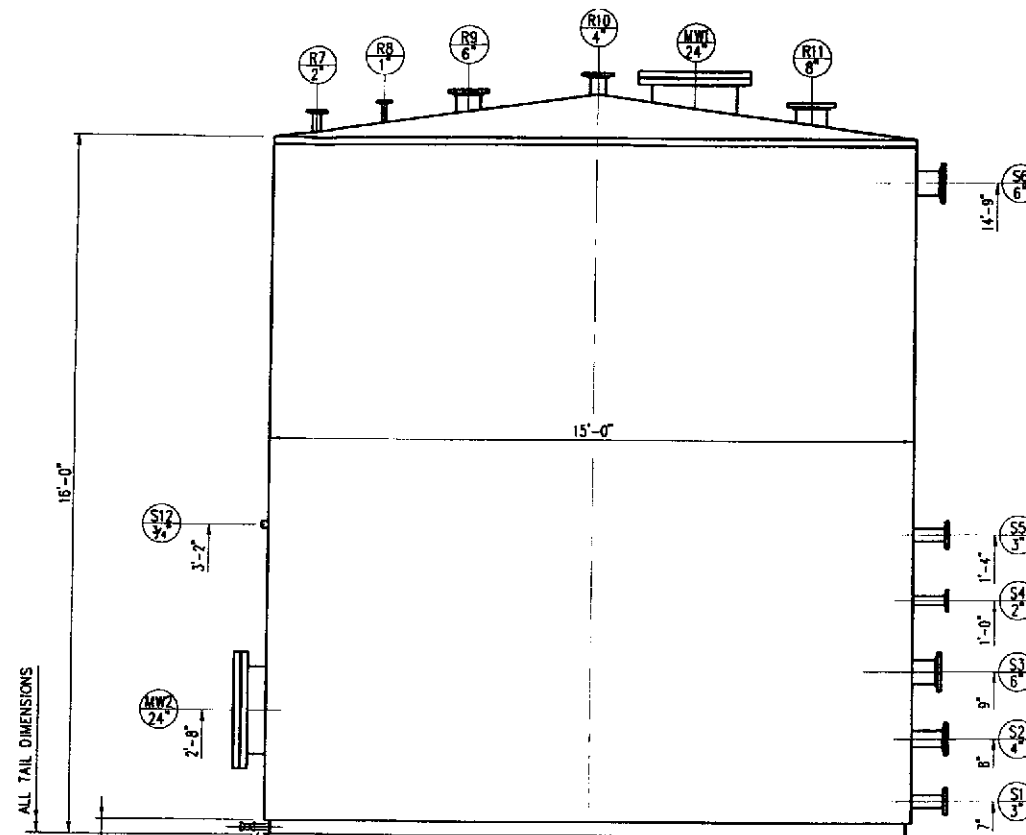
NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	DRAWING NUMBER	REFERENCE DRAWINGS
0	FIELD VERIFIED & REDRAWN ON CAD	8/02	WP					01-10-0001	DISPOSAL PLOT PLAN
								IND1289	DIAMOND FIBERGLASS FABRICATORS - HCI STORAGE TANK FOR EMPAC
								05-10-0016	DISPOSAL SITE PLAN - COATINGS

		2759 Battleground Road Deer Park, Texas 77536 (281) 604-6150	
ENGINEER		H & M DESIGN, INC. 8602 SPENCER HWY. LA PORTE, TEXAS 77571	
DRAWN BY:	DATE	PROJ. ENG.:	
WP	08/02	VOPAK ENG.:	
CHECKED BY:		SCALE:	
		ENGINEER JOB NO.:	
H&M JOB #:			
1160-VI			

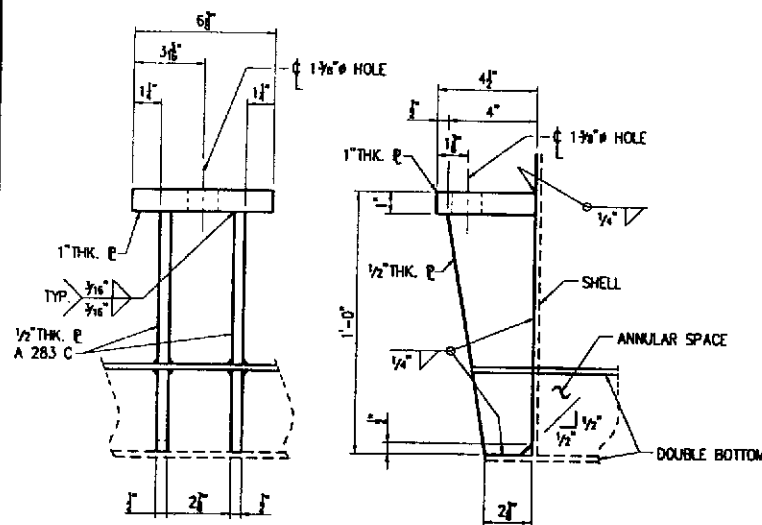
AS BUILTS	
05-T-3 - PLAN AND ELEVATION	
ACID STORAGE	
NOR #25	
Shr. size:	ACad File Name:
D	05-60-T-3-1-REV0.DWG
Drawing Number:	Rev.
05-60-T-3-1	0



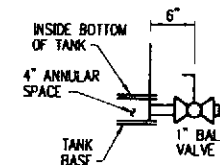
PLAN



ELEVATION



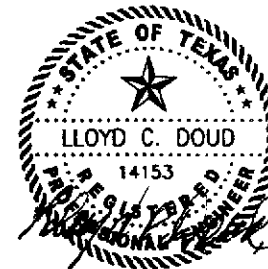
ANCHOR CHAIRS  
(5) REQ'D



LEAK DETECTION DETAIL

NOTE:

THIS DRAWING REDRAWN FROM EXISTING CHICAGO BRIDGE & IRON  
DRAWING NO. 03614. MATERIAL OF CONSTRUCTION & DESIGN  
CONDITION SHOWN ABOVE ARE REFERENCED FROM THIS DRAWING.



This Seal dated 9-14-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

MATERIALS OF CONSTRUCTION

	VESSEL OR SHELL SIDE	JACKET OR TUBE SIDE
SHELL	A 283 C	
HEADS	A 283 C	
FLANGES	A 105	
NOZZLE NECKS	A-53	
VESSEL SUPPORTS		
EXTERNAL BOLTS	A 307	
NUTS	A 307 GRA	
INTERNAL BOLTS		
NUTS		
GASKETS		
MANWAYS	A 283 C	

DESIGN CONDITIONS

DESIGN PRESS.	
DESIGN TEMP.	
OPERATING PRESS.	ATMS
OPERATING TEMP.	150 F
CORR. ALLOWED	1/8"
CODE	API 650 9th EDITION, REV. 3
CODE STAMP	
STRESS STAMP	
STRESS RELIEF	
RADIOGRAPH	
JOINT EFF.	
HYDRO TEST	
SP. GR. CONTENTS	

CAPACITIES AND WEIGHTS

OPERATING CAP.	21,000 GAL	CU. FT.
FULL CAPACITY		
EMPTY WEIGHT	165 LBS	LBS
OPERATING WEIGHT		

NOZZLE SCHEDULE

MARK	No.	SIZE	RATING	FACING	"T"	O.S. PROJ.	TYPE	SERVICE
S1	1	3"	150	RF	5"			SPARE W/ BLIND
S2	1	4"	150	RF	6"			SLUDGE
S3	1	6"	150	RF	6"			WELT
S4	1	2"	150	RF	4 1/2"			STEAM
S6	1	3"	150	RF	6"			SUCKON
S6	1	6"	150	RF	6"			OVERFLOW
R7	1	2"	150	RF	6"			VENT / VAPOR CONTROL
R8	1	1"	150	RF	6"			HI LEVEL
R9	1	6"	150	RF	6"			THERMOCOUPLE
R10	1	4"	150	RF	6"			VENT
R11	1	8"	150	RF	6"			GAGE HATCH
S12	1	3 1/2"	3000	RF				
MW1	1	24"	150	RF	6 3/4"			MANWAY w/ EMERGENCY BLOWOFF
MW2	1	24"	150	RF	5"			MANWAY

GENERAL NOTES

1. SURFACE PREPARATION: NEAR WHITE METAL BLAST SSPC-SP-10-1988.
2. PAINTING: ROOF - ZINC/EPXY/POLYURETHANE  
SHELL - EPXY/PHENOLIC
3. INSULATION: POLY ISOCYANURATE W/ 0.024 STUCCO ALUMINUM.
4. LIST OF APPLICABLE VOPAK STANDARDS AND SPECS.  
REGISTRATION NO'S: 0900, 0920, 09240, 01800

VOPAK REFERENCE DATA

PURCH. ORDER No.	ASSET NUMBER	PURCH. ORDER DATE	1990
ITEM NUMBER	ASSET NUMBER	ITEM NUMBER	ASSET NUMBER

MANUFACTURER DATA

MPR NAME: CHICAGO BRIDGE & IRON COMPANY	
STREET / P.O. BOX:	
CITY:	STATE: ZIP:
TELEPHONE No.:	FAX No.:
ENGINEERING CONTACT:	
MPR SERIAL No.:	SHOP ORDER No.:
MPR DWG. No.:	REV:

CEA-00-N/A

NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	DRAWING NUMBER	REFERENCE DRAWINGS
0	FIELD VERIFIED & REDRAWN ON CAD	8/12	J.A.M.					01-10-0001	DISPOSAL PLOT PLAN
								03614	CHICAGO BRIDGE & IRON - GENERAL PLAN - TANK T-4B
								Y273-9005	PETROMAS INCORPORATED - T-4B - TANK OUTLINE
								0-10380	BAKER TANK - 15'-0" x 8'-0" TOP RING W CONNECTIONS.
								05-10-0016	DISPOSAL SITE PLAN - COATINGS

**Vopak**  
INDUSTRIAL SERVICES

2759 Bottleground Road  
Deer Park, Texas 77536  
(281) 604-6150

ENGINEER **H&M** DESIGN, INC.  
8602 SPENCER HWY.  
LA PORTE, TEXAS 77571

PH / (281) 930-8750  
FAX / (281) 930-8711  
E-MAIL: hnm@hnmdesigninc.com

DRAWN BY: J.A.M. DATE: 08/12/02  
CHECKED BY: PAM SMOLEN N.T.S.  
H&M JOB #: 1160-VI

PROJ. ENG.:  
VOPAK ENG.:  
ENGINEER JOB NO. PD

AS BUILTS

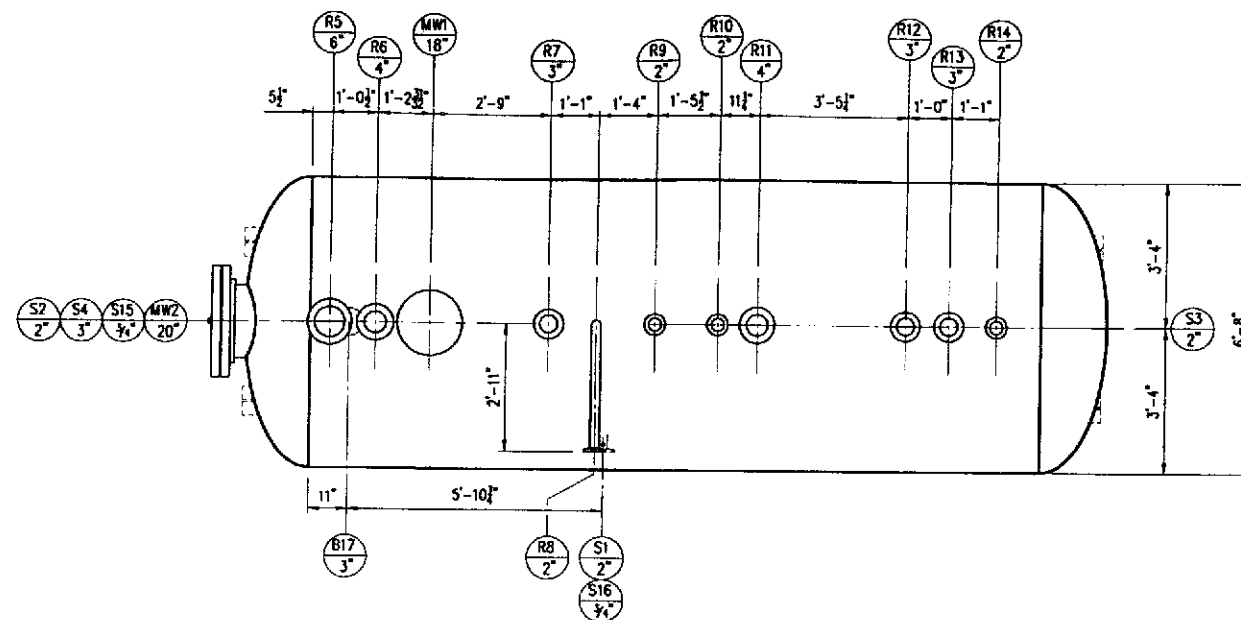
05-T-4B-PLAN, ELEVATION, & DETAILS

FUELS/SLUDGE TREATMENT

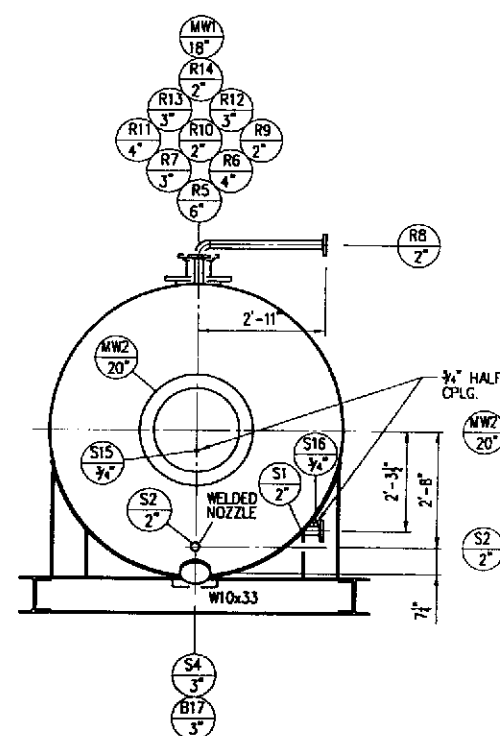
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Shl. size:	ACad File Name:	Drawing Number:	Rev.
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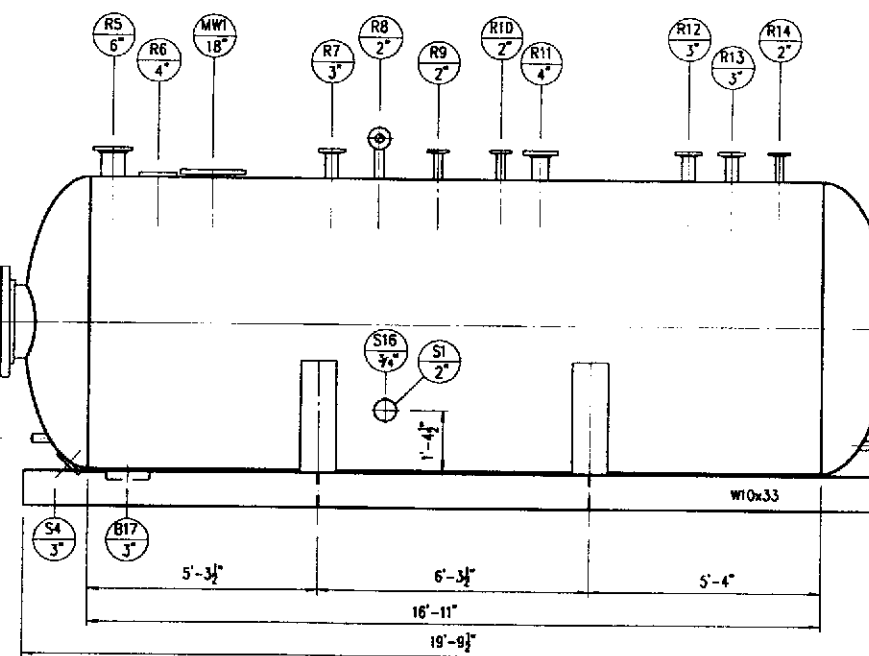




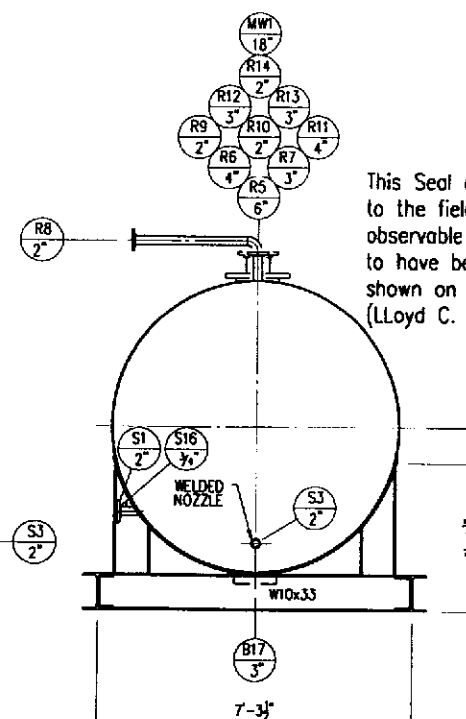
PLAN



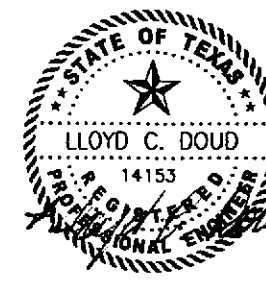
END VIEW  
LOOKING EAST



ELEVATION  
LOOKING NORTH



END VIEW  
LOOKING WEST



This Seal dated 9-18-07 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

# MATERIALS OF CONSTRUCTION

SHELL	SS
HEADS	SS
FLANGES	SS
NOZZLE NECKS	SS
VESSEL SUPPORTS	CS (GALVANIZED)
INTERNAL BOLTS	
INTERNAL NUTS	
EXTERNAL BOLTS	
EXTERNAL NUTS	
GASKETS	

## DESIGN CONDITIONS

DESIGN PRESS.	
DESIGN TEMP.	
OPERATING PRESS.	2.000 / 1/2 IN. / 5/2 IN.
OPERATING TEMP.	150°F
CORR. ALLOWED	
CODE	
CODE STAMP	
STRESS STAMP	
STRESS RELIEF	
RADIOGRAPH	
JOINT TEST	
HYDRO TEST	
SF. GR. CONTENTS	

## CAPACITIES AND WEIGHTS

OPERATING CAP.	3525	GAL.		CU. FT.
FULL CAPACITY		GAL.		CU. FT.
EMPTY WEIGHT		LBS.		LBS.
OPERATING WEIGHT		LBS.		LBS.

## NOZZLE SCHEDULE

MARK	No.	SIZE	RATING	FACING	"T"	O.S. PROJ.	TYPE	SERVICE
S1	1	2"					EXST.	LEVEL GAUGE
S2	1	2"					EXST.	CONDENSATE OUTLET
S3	1	2"					EXST.	STEAM INLET
S4	1	5"					EXST.	SUCTION
R5	1	6"					EXST.	GAUGE NATCH
R6	1	4"					EXST.	INLET
R7	1	5"					EXST.	PROC. IN
R8	1	2"					EXST.	LEVEL GAUGE
R9	1	2"					EXST.	NITROGEN
R10	1	2"					EXST.	SPARE
R11	1	4"					EXST.	HIGH LEVEL
R12	1	3"					EXST.	VENT/VAPOR CONTROL
R13	1	3"					EXST.	SPARE
R14	1	2"					EXST.	VENT
S15	1	3/4"					EXST.	TEMPERATURE
S16	1	3/4"					EXST.	SPARE
B17	1	5"					EXST.	SPARE
MW1	1	18"					EXST.	MANWAY
MW2	1	20"					EXST.	MANWAY

## GENERAL NOTES

## VOPAK REFERENCE DATA

PURCH. ORDER NO.		PURCH. ORDER DATE	1002
ITEM NUMBER	ASSET NUMBER	ITEM NUMBER	ASSET NUMBER

## MANUFACTURER DATA

MFR. NAME: _____		
STREET / P.O. BOX: _____		
CITY: _____	STATE: _____	ZIP: _____
TELEPHONE No.: { _____ }	FAX No.: { _____ }	
ENGINEERING CONTACT: _____		
MFR. SERIAL No.: _____	SHOP ORDER No.: _____	
MFR. DWG. No.: _____	REV.: _____	

CEA-00-NO

AS BUILTS

05-T-4E - PLAN AND ELEVATION

FUELS HOLDING/TREATMENT

NOR#30

Sht. size:	ACad File Name:	Drawing Number:	Rev.
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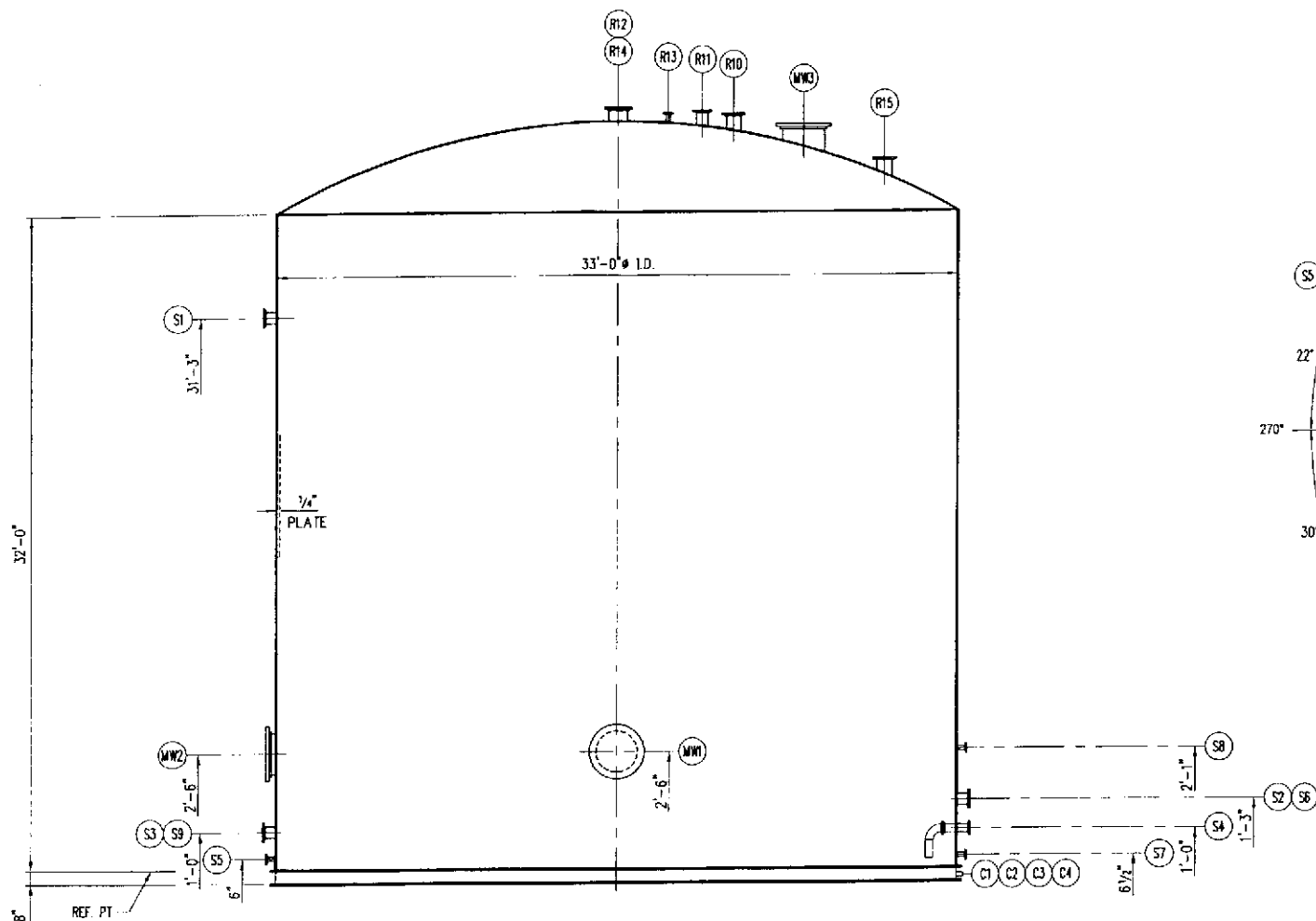
NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	DRAWING NUMBER	REFERENCE DRAWINGS
0	FIELD VERIFIED AND DRAWN ON CAD	8/02	J.A.M.					01-10-0001	DISPOSAL PLOT PLAN
								05-10-0016	DISPOSAL SITE PLAN - COATINGS

**Vopak**  
INDUSTRIAL SERVICES

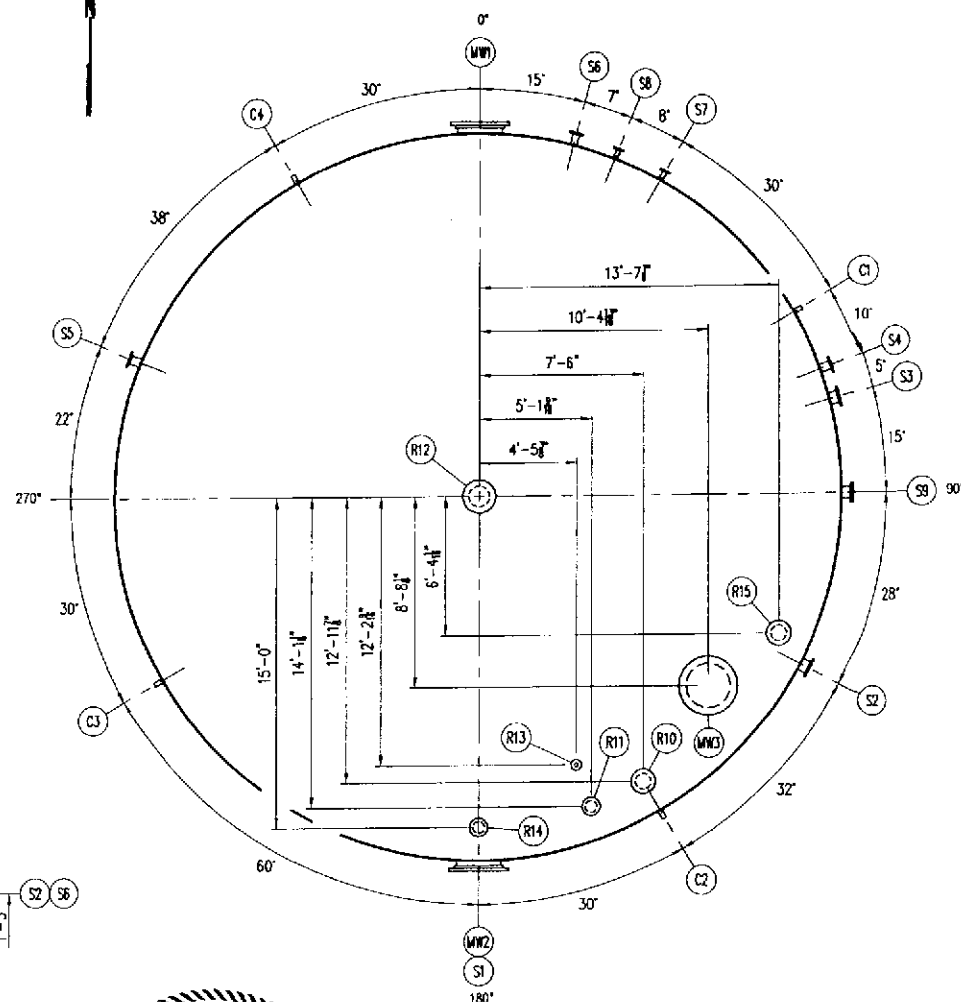
2759 Battleground Road  
Deer Park, Texas 77536  
(281) 604-6150

ENGINEER: H & M DESIGN, INC.  
6602 SF JACER HWY.  
LA PORTE, TEXAS 77571  
PH: (281) 930-8750  
FAX: (281) 930-8711  
E-MAIL: hmdesigninc.com

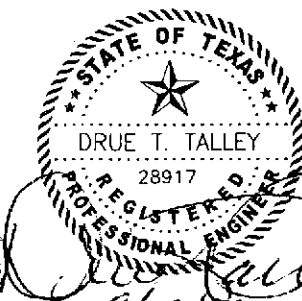
DRAWN BY:	DATE	PROJ. ENG.:
P.P.	8/02	
CHECKED BY:		VOPAK ENG.:
		PAM SMOLLEN
H&M JOB #:		SCALE:
1160-VI		N.T.S.
		ENGINEER JOB NO.:
		-PD



ELEVATION



PLAN



This Seal dated 9/12/03 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing (Drue T. Talley, P.E. #28917).

NOTE:

THIS DRAWING REDRAWN FROM EXISTING PASADENA TANK CORPORATION DRAWING NO. 200-043-F02. MATERIAL OF CONSTRUCTION & DESIGN CONDITIONS SHOWN ABOVE ARE REFERENCED FROM THIS DRAWING.

MATERIALS OF CONSTRUCTION

	VESSEL OR SHELL SIDE	JACKET OR TUBE SIDE
SHELL	A-36	
HEADS	A-36	
FLANGES	A-105	
NOZZLE NECKS	A-53-B	
VESSEL SUPPORTS	A-36	
INTERNAL BOLTS NUTS	A-307	
EXTERNAL BOLTS NUTS	A-307	
GASKETS	COMP NON ASBESTOS	

DESIGN CONDITIONS

DESIGN PRESS.	INT. 5' W.C./EXT. 1' W.C.
DESIGN TEMP.	200°F
OPERATING PRESS.	
OPERATING TEMP.	
CORR. ALLOWED	0
CODE	API 650 APP. 1"
CODE STAMP	N/A
STRESS RELIEF	N/A
RADIOGRAPH	SPOT
JOINT EFF.	1.0
HYDRO TEST	FILL WITH WATER
SP. GR. CONTENTS	1.10

CAPACITIES AND WEIGHTS

OPERATING CAP.	200,000 GAL.	CU. FT.
FULL CAPACITY	200,000 GAL.	CU. FT.
EMPTY WEIGHT	LBS.	LBS.
OPERATING WEIGHT	LBS.	LBS.

NOZZLE SCHEDULE

MARK	No.	SIZE	RATING	FACING	"T"	O.S. PROJ. TYPE	SERVICE
MM1	1	2"	150	RF50	6"		MANWAY
MM2	1	2"	150	RF50	6"		MANWAY
MM3	1	2"	150	RF50	6"		EMERGENCY VENT
S1	1	1"	150	RF50	1'-3"		OVER FLOW
S2	1	1"	150	RF50	6"		14" PRESS. INLET
S3	1	1"	150	RF50	6"		PUMP SUCTION
S4	1	1"	150	RF50	6"		PUMP SUCTION (LOW)
S5	1	1"	150	RF50	6"		567 PROCESS LINE INLET
S6	1	1"	150	RF50	6"		LEVEL INDICATOR
S7	1	1"	150	RF50	6"		FILTRATE INLET
S8	1	1"	150	RF50	6"		SAMPLE NOZZLE
S9	1	1"	150	RF50	6"		SPARE W/ BLIND
R10	1	1"	150	RF50	6"		GAGE HATCH
R11	1	1"	150	RF50	6"		SPARE W/ BLIND
R12	1	1"	150	RF50	6"		VENT / SCAFFOLD SUP
R13	1	1"	150	RF50	6"		HIGH LEVEL SWITCH
R14	1	1"	150	RF50	6"		PRIMARY VENT
R15	1	1"	150	RF50	6"		SPARE W/ BLIND
C1	1	1"	3000	THRD	1'-1/2"		BOTTOM VENT
C2	1	1"	3000	THRD	1'-1/2"		BOTTOM VENT
C3	1	1"	3000	THRD	1'-1/2"		BOTTOM VENT
C4	1	1"	3000	THRD	1'-1/2"		BOTTOM VENT

GENERAL NOTES

- BOLT HOLES TO STRADDLE SHOWN CENTERLINES.
- FABRICATOR TO PROVIDE PROTECTIVE SHIELDS FOR ALL FLANGES AND OPENINGS.
- FABRICATOR SHALL PROVIDE GASKETS, BOLTS AND HEX NUTS FOR ALL MATING PARTS INCLUDING BLIND FLANGES WHERE NOTED.
- SPARE SET OF GASKETS IS REQUIRED (TWO SETS).
- INDICATE MACHINE FINISHED SURFACES IN MICROINCHES WITH ANSI SYMBOL.
- INSULATION SUPPORTS (NOT) REQUIRED.
- SURFACE PREPARATION
- PAINTING
- LIST OF APPLICABLE VOPAK STANDARDS AND SPECS.

10. UNLESS OTHERWISE SHOWN, DIMENSIONS FROM FACE OF FLANGE TO OUTSIDE SURFACE OF SHELL FOR NOZZLES SHALL BE 6" FOR 4" AND SMALLER SIZES, 8" FOR 6" & 8" SIZES, 10" FOR 10" & LARGER SIZES, 8" FOR MANHOLES & ALL NOZ. NECKS TO BE SCH. 40 PIPE FLG'S 3155S.

VOPAK REFERENCE DATA

PURCH. ORDER No.	200746	PURCH. ORDER DATE	6/00
ITEM NUMBER	ASSET NUMBER	ITEM NUMBER	ASSET NUMBER

MANUFACTURER DATA

MFR. NAME: PTC  
STREET / P.O. BOX: 15915 JANCINTO PORT BLVD.  
CITY: HOUSTON STATE: TEXAS ZIP: 77015  
TELEPHONE No. (281) 457-3996 FAX No. (281) 457-8768  
ENGINEERING CONTACT: SHOP ORDER No.:  
MFR. SERIAL No.: MFR. DWG. No.: REV.:

CEA-00-129

NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	DRAWING NUMBER	REFERENCE DRAWINGS
A	ISSUED FOR APPROVAL	9/00	TEH					01-10-0001	DISPOSAL PLOT PLAN
0	ISSUED FOR CONSTRUCTION	9/00	TEH					05-10-0016	DISPOSAL SITE PLAN - COATINGS
1	GENERAL REVISION	9/03	J.A.M.					05-10-0003	SECONDARY CONTAINMENT
								05-30-0009	05-T-5 - SYSTEM P&ID
								20043-E02	PTC TANK ORIENTATION
								06700354	CUSI-D-FAB T-5 REPAIR REPORT - SEPT. 2003

**Vopak**  
LOGISTICS SERVICES

2759 Battleground Road  
Deer Park, Texas 77536  
(936) 931-5382

ENGINEER  
**H & M DESIGN, INC.**  
8602 SPENCER HWY.  
LA PORTE, TEXAS 77571

DRAWN BY: T.E.H. DATE: 09/22/00  
CHECKED BY: L.W.H. DATE: 09/22/00  
H&M JOB #: 760-EM1345-VI

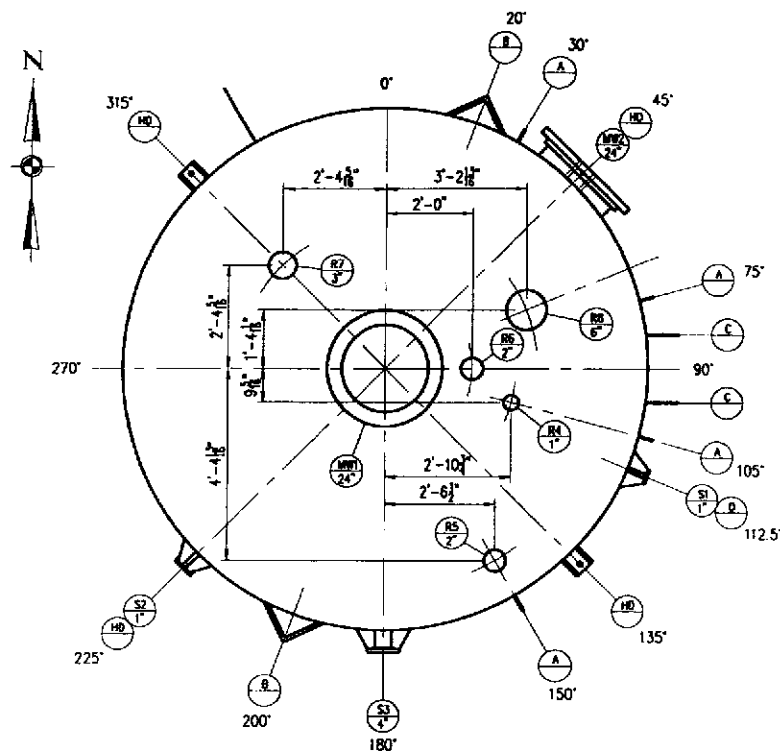
PH: (281) 930-8750  
FAX: (281) 930-8711  
E-MAIL: hnm@hmdesigninc.com

PROJ. ENG.:  
VOPAK ENG.: P. SMOLEN  
ENGINEER JOB NO.

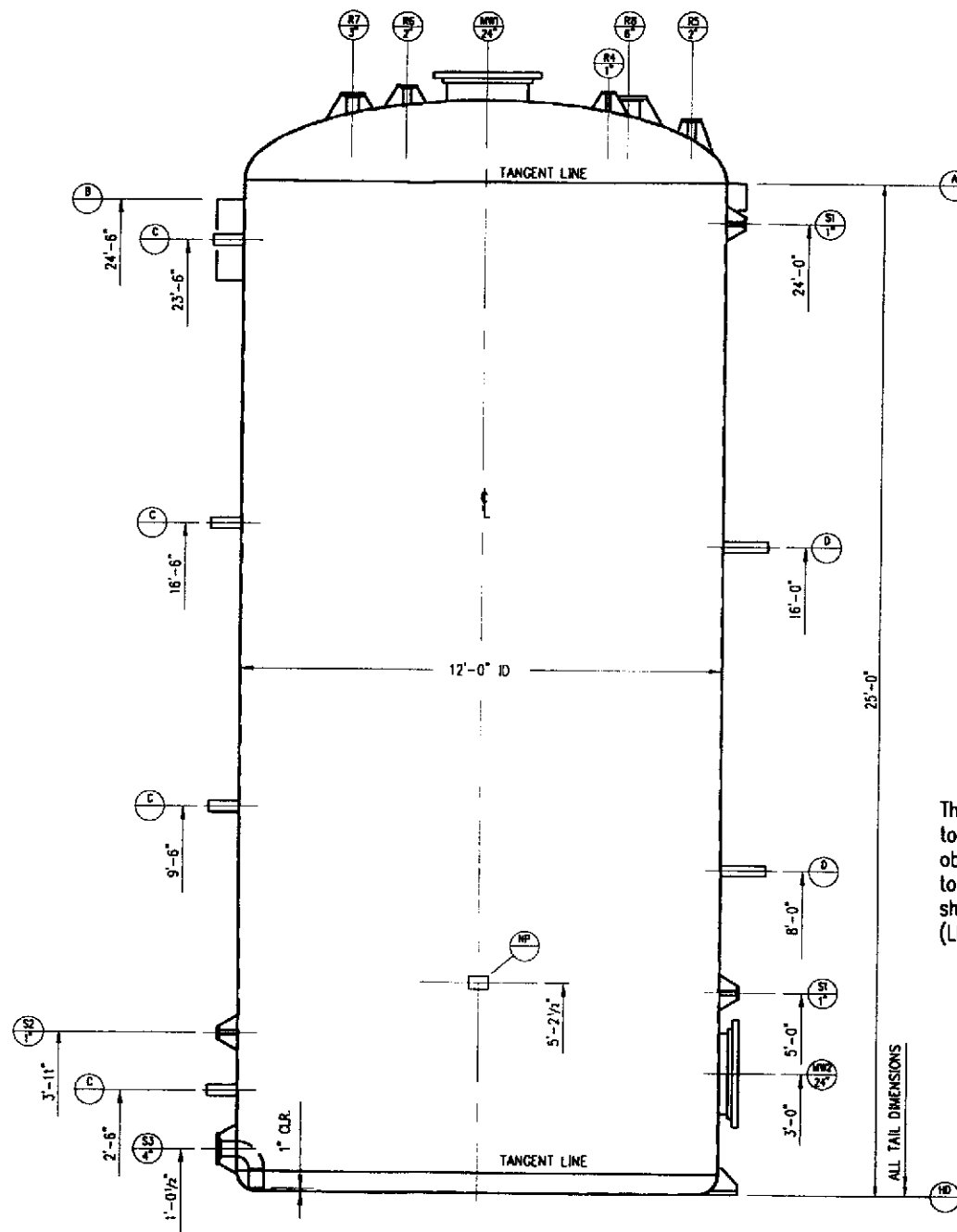
**AS-BUILT**  
**05-T-5 PLAN & ELEVATION**  
**FILTER FEED TANK**

NOR #31

Shl. size: D ACad File Name: 05-60-T-5-1-Rev1.dwg Drawing Number: 05-60-T-5-1 Rev. 1



PLAN



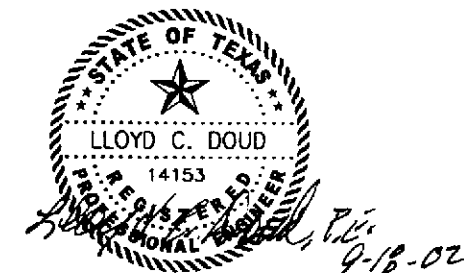
ELEVATION

NOTE:

THIS DRAWING REDRAWN FROM EXISTING INDUSTRIAL PIPE AND PLASTICS  
DRAWING NO. 930127-LA-01-REV. 1. MATERIAL OF CONSTRUCTION & DESIGN  
CONDITIONS SHOWN ABOVE ARE REFERENCED FROM THIS DRAWING & NAME PLATE ON TANK.

VESEL	DATE OF ORDER	DEC 1992	YEAR BUILT	APRIL 1993
MFG. OF EQUIP.	INDUSTRIAL PIPE & PLASTICS	DESIGN OF PSIG & F	PRESS. TEMP.	ATM. AMB.
ORDER NO.	930127	VESEL NO.	DERAKANE 470	MEKP
EQUIP. NO.	T-6 HCL WASTE TANK	SHELL	0.25"	TOP HEAD 0.25"
		BOTTOM HEAD	0.25"	

MATERIALS OF CONSTRUCTION	
VESEL OR SHELL SIDE	
SHELL	DERAKANE 470
HEADS	DERAKANE 470
FLANGES	DERAKANE 470
NOZZLE NECKS	DERAKANE 470
VESEL SUPPORTS	DERAKANE 470
EXT. BOLTS/NUTS	BY OTHERS
INT. BOLTS/NUTS	N/A
GASKETS	BY OTHERS
CATALYST SYSTEMS	
LINER	
RESIN	MEKP
RE-INFORCEMENT THICKNESS	
STRUCTURAL	
RESIN	MEKP
MATERIAL	
THICKNESS	
DESIGN CONDITIONS	
DESIGN PRESS.	ATMOS.
DESIGN TEMP.	AMBIENT
OPERATING PRESS.	ATMOS.
OPERATING TEMP.	AMBIENT
CORR. ALLOW.	
CODE	
HYDRO TEST.	
SP. GR. CONTENTS	
WIND	
SEISMIC	
CAPACITIES AND WEIGHTS	
OPERATING CAP	21,150
FULL CAPACITY	
EMPTY WEIGHT	
OPERATING WEIGHT	



This Seal dated 9-18-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

GENERAL NOTES

1. ALL FRP FLANGES ARE FLAT FACED.
2. GLASS CONTENT OF LINER TO BE 20 - 31% MIN. BY WEIGHT
3. GLASS CONTENT OF SHELL TO BE 63% MIN. BY WEIGHT
4. COLOR - NATURAL
5. LEAK DETECTION VIA V-NOTCH IN FOUNDATION.

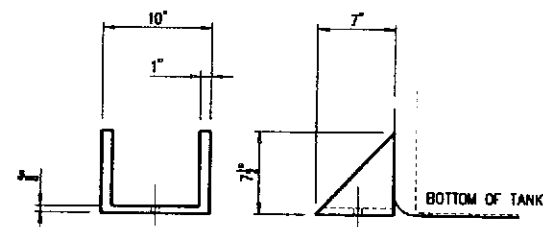
MARK #	REQ'D NO.	RATING (PSIG)	NOZ. I.D. (IN.)	PROJ. (IN.)	FLG. O.D. (IN.)	B.C. (IN.)	SF SPOT FACE	NUTS/BOLTS GASKETS BY MFG.	BOLT HOLE (IN.) NO. DIA.	BOLT SIZE (IN.) DIA. LGTH.	STD. BOLT (IN.) LGTH.	REMARKS
S1	2	150	1	6	4 3/8	3 1/2		NO	4 3/8	1/2 3	4	LEVEL GAUGE
S2	1	150	1	6	4 3/8	3 1/2		NO	4 3/8	1/2 3	4	SAMPLE PORT
S3	1	150	4	6	9	7 1/2		NO	8 3/4	3/2 3 1/2	4 1/2	INLET & OUTLET
R4	1	150	1	6	4 3/8	3 1/2		NO	4 3/8	1/2 3	4	HI LEVEL
R5	1	150	2	6	4 3/4	6		NO	4 3/4	3/2 3	4	VAPOR CONTROL
R6	1	150	2	6	4 3/4	6		NO	4 3/4	3/2 3	4	VENT
R7	1	150	3	6	7 1/2	6		NO	4 3/4	3/2 3 1/4	4 1/4	SPARE W/ BLIND
R8	1	150	6	6	11	9 1/2		NO	8 3/4	3/2 3 3/4	5	SPARE W/ BLIND
MW1	1	50	24	8	32	29 1/2		NO	20 1 3/8	1 1/4 5 1/4	7	MANWAY
MW2	1	50	24	8	32	29 1/2		NO	20 1 3/8	1 1/4 5 1/4	7	MANWAY
A	4											12"x4"x3/8" HAND RAIL CLIPS
B	2											LIFTING LUGS
C	4 PR.											9"x3/4"x1/2" LADDER CLIPS
D	2											14"x3/4"x1/2" PIPE SUPPORTS
NP	1											NAME PLATE
HD	4											HOLD DOWN

CEA-00-NO

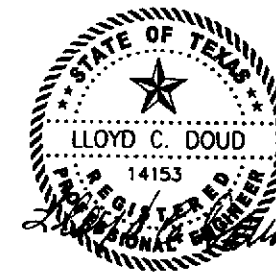
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								930127-LA-01	IPP INC. - EMPAK T-6 HCL-WASTE ACID TANK REV. 1
								05-10-0016	DISPOSAL SITE PLAN - COATINGS

<b>Vopak</b> INDUSTRIAL SERVICES		2759 Battleground Road Deer Park, Texas 77536 (281) 604-6150	
ENGINEER	H & M DESIGN, INC. 8602 SPENCER HWY. LA PORTE, TEXAS 77571	PH # (281) 830-8750 FAX # (281) 830-8711 E-MAIL hnm@hnmdesigninc.com	
DRAWN BY:	CJD	DATE	08/02
CHECKED BY:	PAM SMOLEN	SCALE:	N.T.S.
H&M JOB #:	1160-VI	ENGINEER JOB NO.	-PD

AS BUILTS			
05-T-6 - PLAN AND ELEVATION			
ACID STORAGE			
NOR #32			
Sht. size:	ACed File Name:	Drawing Number:	Rev.
D	05-60-T-6-1-REV0.DWG	05-60-T-6-1	0





ELEVATION



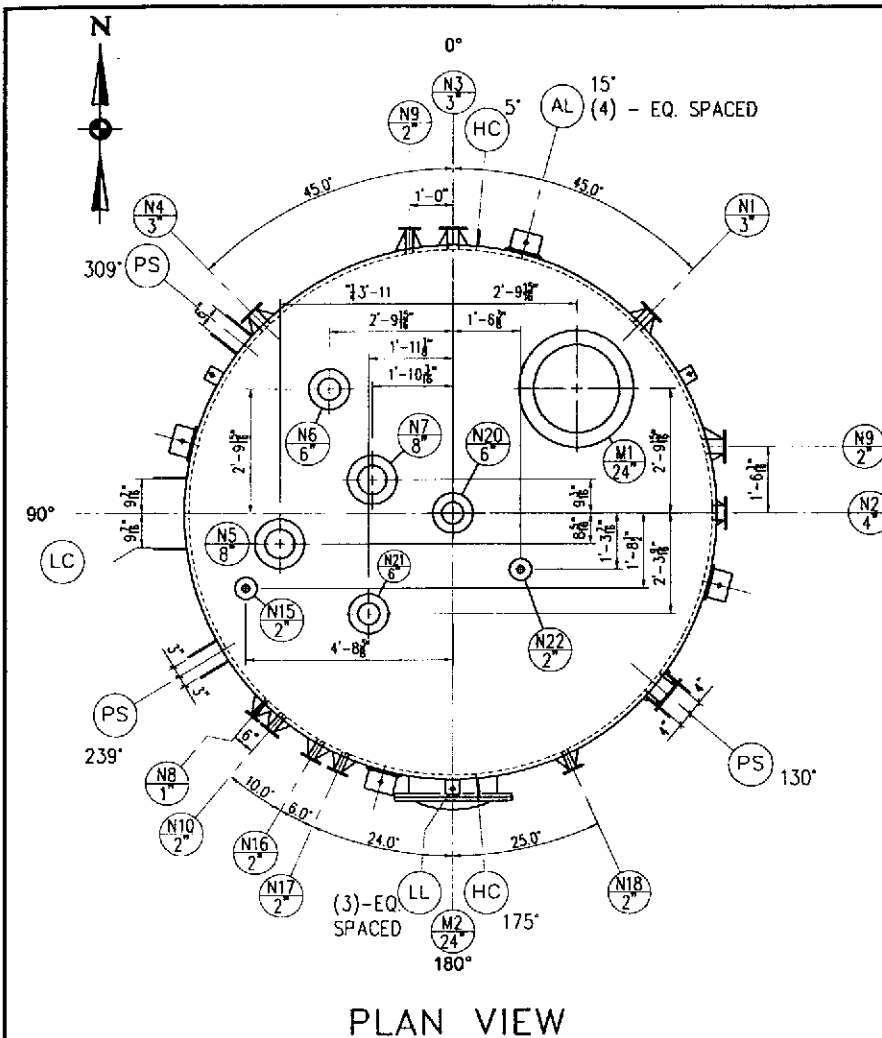
THIS DRAWING REDRAWN FROM EXISTING CAN+TEX INDUSTRIES  
DRAWING NO. 680-141-REV A. MATERIAL OF CONSTRUCTION & DESIGN  
CONDITIONS ARE REFERENCED FROM THIS DRAWING.

CEA-00-NO

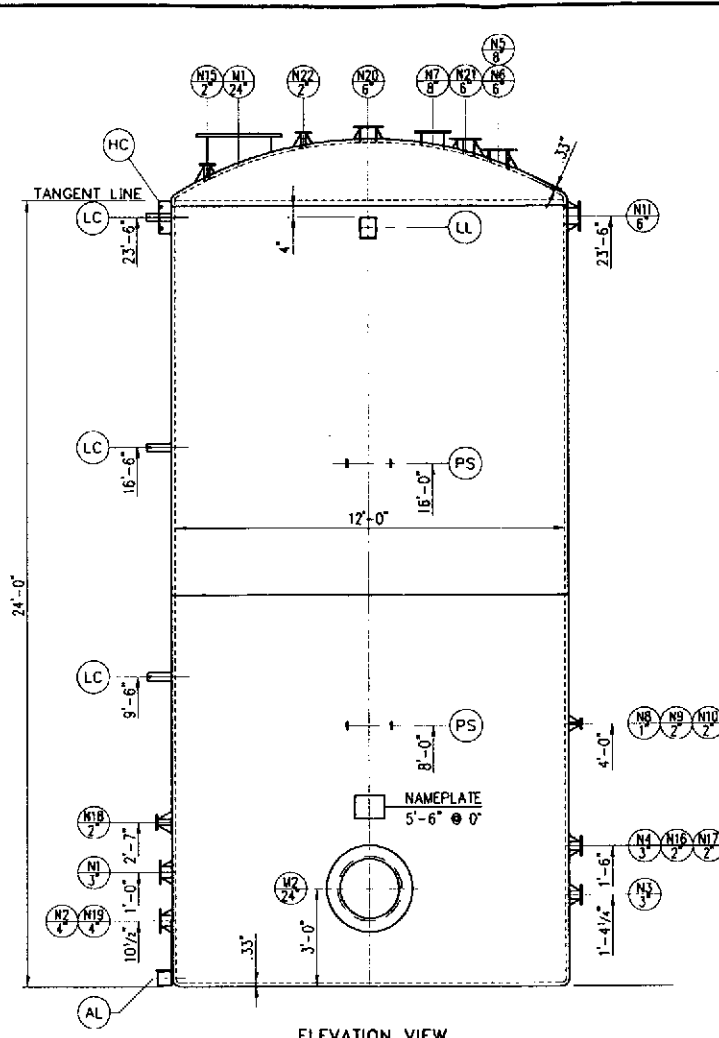
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-----------------	---	--------------------------------	-----------

 <b>Vopak</b> <b>INDUSTRIAL SERVICES</b>		2759 Battleground Road Deer Park, Texas 77536 (281) 604-6150	
ENGINEER		H & M DESIGN, INC. 8002 SPENCER HWY. LA PORTE, TEXAS 77571	PH # (281) 930-8750 FAX # (281) 930-8711 E-MAIL hnm@hnmdesigninc.com
DRAWN BY:	WP	DATE	08/02
CHECKED BY:			
H&M JOB #:	1180-M		
		PROJ. ENG.:	
		VOPAK ENG.:	PAM SMOLEN
		SCALE:	N.T.
		ENGINEER JOB NO.	

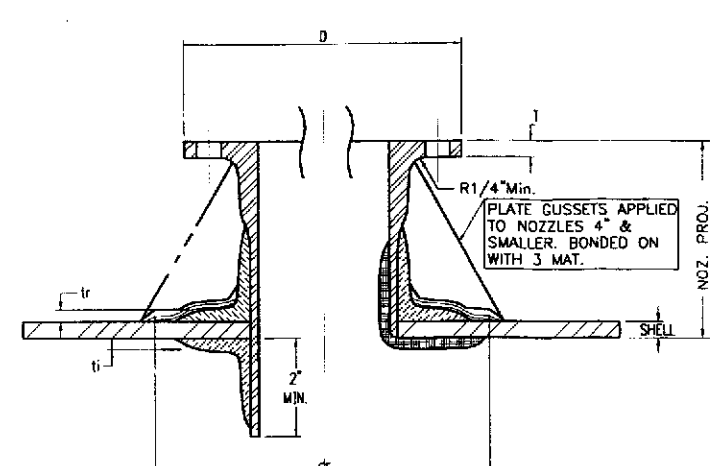




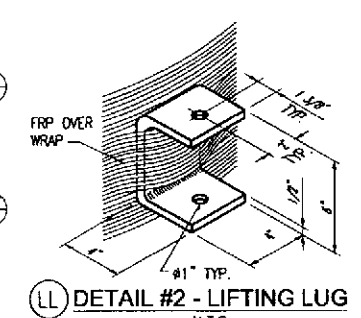
PLAN VIEW



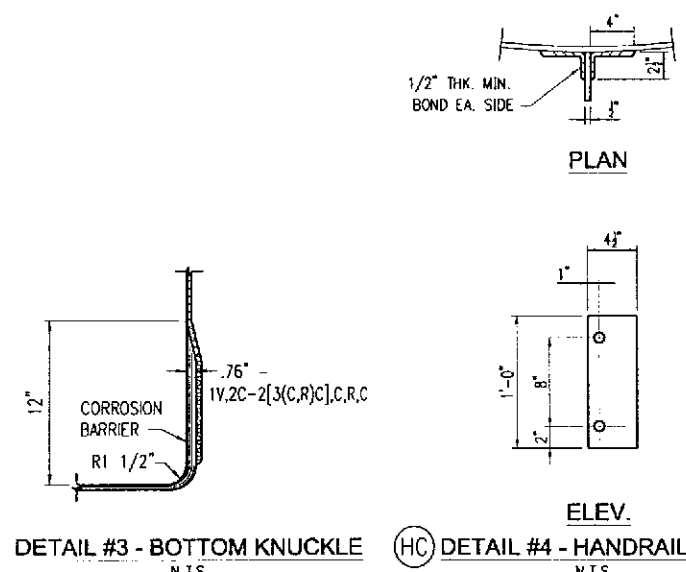
ELEVATION VIEW  
SEE PLAN VIEW FOR TRUE ORIENTATION



DETAIL #1 - NOZZLE DETAIL  
N.T.S.

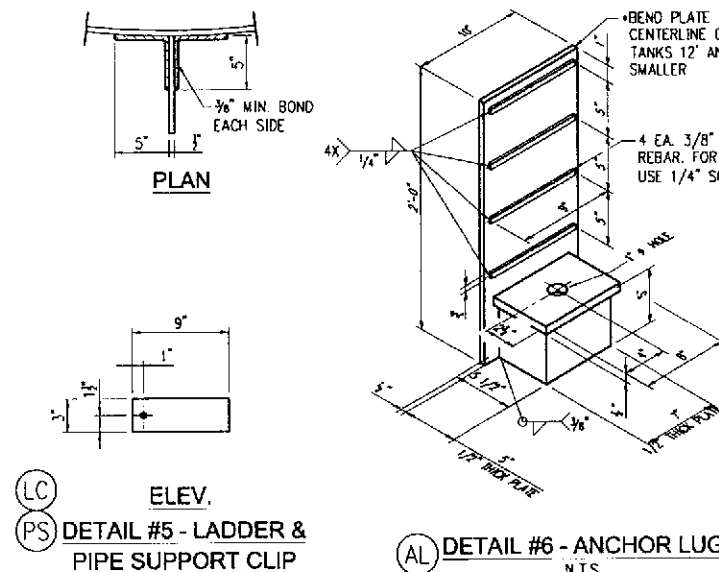


DETAIL #2 - LIFTING LUG  
N.T.S.



DETAIL #3 - BOTTOM KNUCKLE  
N.T.S.

DETAIL #4 - HANDRAIL CLIP  
N.T.S.



DETAIL #5 - LADDER & PIPE SUPPORT CLIP  
N.T.S.

DETAIL #6 - ANCHOR LUG  
N.T.S.

MATERIALS OF CONSTRUCTION		
	VESSEL OR SHELL SIDE	JACKET OR TUBE SIDE
SHELL	QUACORR 1001/1002	
HEADS	QUACORR 1001/1002	
FLANGES	QUACORR 1001/1002	
NOZZLE NECKS	QUACORR 1001/1002	
VESSEL SUPPORTS		
EXTERNAL BOLTS	A307	
EXTERNAL NUTS	A307	
GASKETS	VTOR	

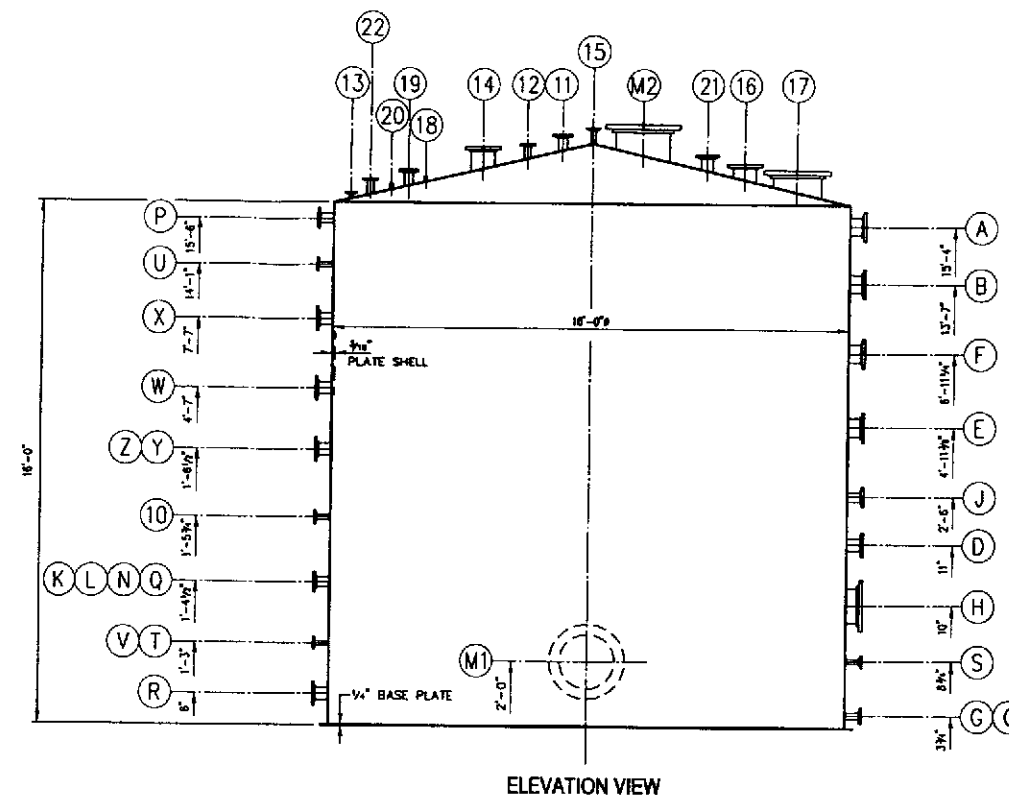
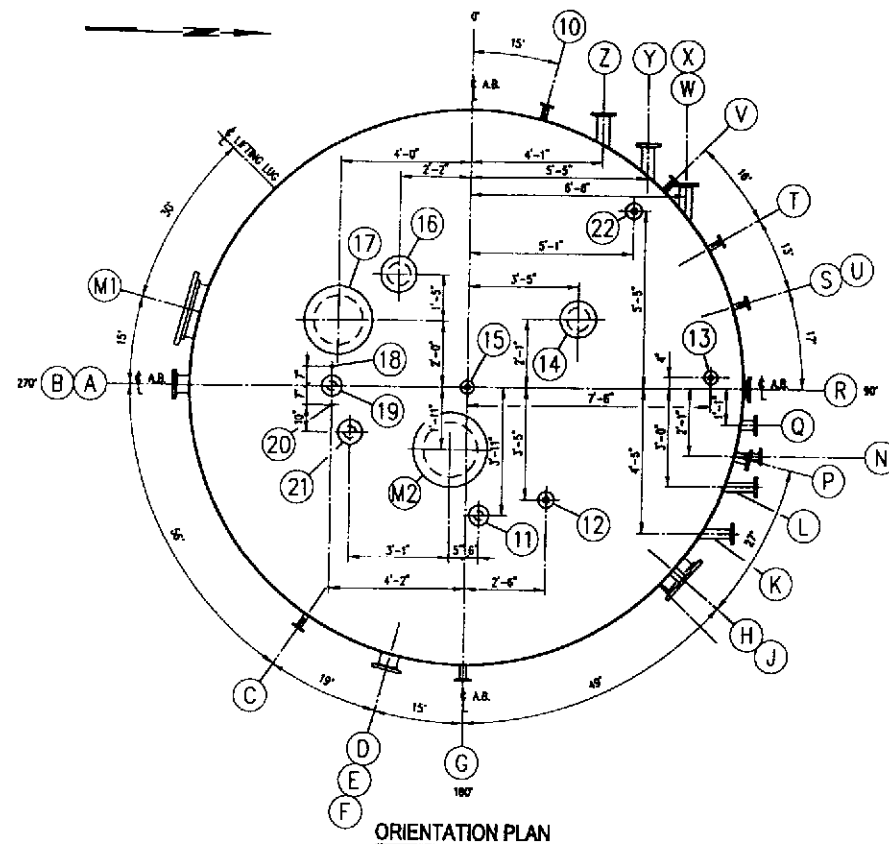
DESIGN CONDITIONS		
DESIGN PRESS.	10.000 PSIG	-0.0001 PSIG
DESIGN TEMP.	120°	
OPERATING PRESS.		
OPERATING TEMP.		
CORR. ALLOWED		
CODE	ASME U 3299 / D 4097	
CODE STAMP		
STRESS STAMP		
STRESS RELIEF		
RADIOGRAPH		
JOINT EFF.		
HYDRO TEST	WATER	
SP. GR. CONTENTS	1.00	

CAPACITIES AND WEIGHTS		
OPERATING CAP.	20.35 GAL	CU. FT.
FULL CAPACITY	5.782 LBS.	CU. FT.
EMPTY WEIGHT	192.133 LBS.	LBS.
OPERATING WEIGHT		

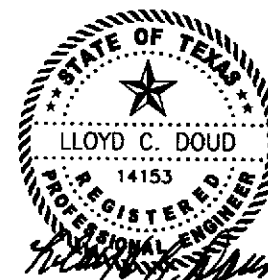
VOPAK REFERENCE DATA			
PURCH. ORDER No.	210974	PURCH. ORDER DATE	9/01
ITEM NUMBER	ASSET NUMBER	ITEM NUMBER	ASSET NUMBER
02-T-8			

MANUFACTURER DATA			
MFR. NAME:	TANKKINETICS, INC.		
STREET / P.O. BOX:	P.O. BOX 1195		
CITY:	HARRISON	STATE:	ARKANSAS
TELEPHONE No.:	(870) 741-2628	FAX No.:	
ENGINEERING CONTACT:			
MFR. SERIAL No.:		SHOP ORDER No.:	12674-01
MFR. DWG. No.:	C-01-2674-01	REV.:	

NOZZLE SCHEDULE																	
NK #	REC'D NO.	NOZ. LO. (D)	RATING (PSIG)	NECK THK (in)	FLG. THK (T)	FLG. O.D. (D)	QTY. BOLT.	DIA. BOLT.	DIA. HOLE	DIA. SPOT	NOZ. PROL (PROL)	BOLTS BY FAB	RENF THK (in)	RENF DIA. (in)	IN THK (T)	GUSSETS (T)	REMARKS
N1	1	3"	150#	26"	1/2"	7 7/8"	4	3/4"	3/4"	-	6"	NO	3/8"	9"	0.100	4 @ 25	LEVEL
N2	1	4"	150#	26"	1/2"	9"	8	3/4"	3/4"	-	4"	NO	4 3/8"	10"	0.100	4 @ 25	SUCTION
N3	1	3"	150#	26"	1/2"	7 7/8"	4	3/4"	3/4"	-	6"	NO	3/8"	9"	0.100	4 @ 25	FIRED FROM FILTERS
N4	1	3"	150#	26"	1/2"	7 7/8"	4	3/4"	3/4"	-	6"	NO	3/8"	9"	0.100	4 @ 25	SPARE
N5	1	8"	150#	26"	3/4"	13 1/8"	6	3/4"	3/4"	-	6"	NO	-	-	0.100	-	GAUGE HATCH
N6	1	6"	150#	26"	3/4"	11"	8	3/4"	3/4"	-	6"	NO	-	-	0.100	4 @ 25	SPARE
N7	1	8"	150#	26"	3/4"	13 1/8"	6	3/4"	3/4"	-	6"	NO	-	-	0.100	-	LEVEL
N8	1	1"	150#	26"	1/2"	4 1/4"	4	1/2"	3/4"	-	6"	NO	-	-	0.100	4 @ 25	SPARE
N9	1	2"	150#	26"	1/2"	6"	4	3/4"	3/4"	-	7"	NO	1 1/8"	8"	0.100	4 @ 25	SPARE
N10	1	2"	150#	26"	1/2"	6"	4	3/4"	3/4"	-	6"	NO	3 1/8"	8"	0.100	4 @ 25	PH
N11	1	2"	150#	26"	3/4"	11"	6	3/4"	3/4"	-	6"	NO	-	-	0.100	4 @ 25	OVERFLOW
N12	1	2"	150#	26"	1/2"	6"	4	3/4"	3/4"	-	6"	NO	-	-	0.100	4 @ 25	NITROGEN
N13	1	2"	150#	26"	1/2"	6"	4	3/4"	3/4"	-	6"	NO	2 1/4"	8"	0.100	4 @ 25	SAMPLE
N14	1	2"	150#	26"	1/2"	6"	4	3/4"	3/4"	-	6"	NO	2 1/4"	8"	0.100	4 @ 25	PH
N15	1	2"	150#	26"	1/2"	6"	4	3/4"	3/4"	-	6"	NO	2 1/4"	8"	0.100	4 @ 25	TEMPERATURE
N16	1	4"	150#	26"	1/2"	9"	8	3/4"	3/4"	-	6"	NO	4 3/8"	10"	0.100	4 @ 25	SUCTION
N17	1	6"	150#	26"	3/4"	11"	8	3/4"	3/4"	-	6"	NO	-	-	0.100	4 @ 25	PRIMARY VENT
N18	1	6"	150#	26"	3/4"	11"	8	3/4"	3/4"	-	6"	NO	-	-	0.100	4 @ 25	SECONDARY VENT
N22	1	2"	150#	26"	1/2"	6"	4	3/4"	3/4"	-	6"	NO	-	-	0.100	4 @ 25	HI LEVEL PROBE
N1	1	2 1/4"	150#	26"	1"	32"	20	1 1/4"	1 3/8"	-	6"	YES	6 3/8"	48"	0.100	-	TOP MANWAY/WITHOUT COVER
N2	1	2 1/4"	CUSTOM	26"	1"	30"	20	3/4"	3/4"	-	6"	YES	6 3/8"	48"	0.100	-	SIDE MANWAY



NOTE:  
ALL TRAILING DIMENSIONS ARE FROM BTM. OF BASE



This Seal dated 12-12-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. 114153).

**NOTE:**  
THIS DRAWING REDRAWN FROM EXISTING MILES, INC.  
DRAWING NO. D15-0900-MG002-REV 1. MATERIAL OF CONSTRUCTION  
AND DESIGN CONDITION SHOWN ABOVE ARE REFERENCED FROM THIS DRAWING.

MATERIALS OF CONSTRUCTION		
	VESSEL OR SHELL SIDE	JACKET OR TUBE SIDE
SHELL	SA 240-316L	
HEADS	N/A	
FLANGES	A-181 GR. 1, A-182 F-316L	
NOZZLE NECKS	SA 312 TP316L, A240 TP 316L	
VESSEL SUPPORTS		
INTERNAL BOLTS NUTS		
EXTERNAL BOLTS NUTS	ASTM A307 GR. 3	
GASKETS	1/8" IN STYLE # 84	

DESIGN CONDITIONS	
DESIGN PRESS.	AMPS
DESIGN TEMP.	415
OPERATING PRESS.	
OPERATING TEMP.	
CORR. ALLOWED	0
CODE	API 12C
CL. STAMP	N/A
STRESS RELIEF	N/A
RADIOGRAPH	
WELD TEST	MS
WELD MET.	FAL WIM WAND
SP. GR. CONTENTS	

OPERATING CAP.	24,000 GAL.	4011 CU. FY.
FULL CAPACITY	24,000 GAL.	4011 CU. FY.
EMPTY WEIGHT	11,200 LBS.	FULL WATER 252,000 LBS.
OPERATING WEIGHT	281,200 LBS.	FULL PRODUCT LBS.

NOZZLE SCHEDULE							
MARK	No.	SIZE	RATING	FACING	T"	O.S. PROL. TYPE	SERVICE
A	1	6"	150	RF30			
B	1	6"	150	RF30			
C	1	1 1/2"	150	RF30			STEAM COIL
D	1	8"	150	RF30			
E	1	6"	150	RF30			
F	1	6"	150	RF30			
G	1	2"	150	RF30			
H	1	1 1/2"	150	RF30			
J	1	3"	150	RF30			
K	1	3"	150	RF30			
L	1	3"	150	RF30			WLEY
M1	1	20"	S.D. 530	RF30			WAWWAY
M2	1	20"	S.D. 530	RF30			WAWWAY
N	1	2"	150	RF30			
P	1	3"	150	RF30			
Q	1	3"	150	RF30			
R	1	4"	150	ST. OUT			
S	1	1 1/2"	150	RF30			FUTURE LINE
T	1	1 1/2"	150	RF30			
U	1	1 1/2"	150	RF30			FUTURE LEVEL
V	1	1 1/2"	150	RF30			
W	1	4"	150	RF30			PUMP SUCTION
X	1	4"	150	RF30			PUMP SUCTION
Y	1	4"	150	RF30			PUMP SUCTION
Z	1	4"	150	RF30			PUMP SUCTION
10	1	1 1/2"	150	RF30			
11	1	3"	150	RF30			VENT TO ATMOSPHERE
12	1	2"	150	RF30			
13	1	1 1/2"	150	RF30			STEAM COIL
14	1	8"	150	RF30			FUTURE LEVEL
15	1	1 1/2"	150	RF30			
16	1	8"	150	RF30			GUMM HATCH
17	1	16"	150	RF30			EMERGENCY VENT
18	1	1"	150	RF30			
19	1	3"	150	RF30			
20	1	1"	150	RF30			
21	1	4"	150	RF30			VENT TO SCRUBBER
22	1	2"	150	RF30			



GENERAL NOTES

1. BOLT HOLES TO STRADDLE SHOWN CENTERLINES.
2. FABRICATOR TO PROVIDE PROTECTIVE SHEILDS FOR ALL FLANGES AND OPENINGS.
3. FABRICATOR SHALL PROVIDE GASKETS, BOLTS AND HEX NUTS FOR ALL MATING PARTS INCLUDING BLIND FLANGES WHERE NOTED.
4. SPARE SET OF GASKETS IS REQUIRED. (TWO SETS)
5. INDICATE MACHINE FINISHED SURFACES IN MICRONS WITH ANSI SYMBOL.  
e.g., 10 /  $\sqrt{}$ , ETC.
6. INSULATION SUPPORTS (NOT) REQUIRED.
7. SURFACE PREPARATION \_\_\_\_\_
8. PAINTING \_\_\_\_\_
9. LIST OF APPLICABLE VOPAK STANDARDS AND SPECS. \_\_\_\_\_
10. UNLESS OTHERWISE SHOWN, DIMENSIONS FROM FACE OF FLANGE TO OUTSIDE SURFACE OF SHELL FOR NOZZLES SHALL BE, 6" FOR 4" AND SMALLER SIZES, 8" FOR 6" & 8" SIZES, 8" FOR 6" & 8" SIZES, 10" FOR 10" & LARGER SIZES, 8" FOR MANHOLES & ALL NOZ. HEADS TO BE SIZA. 40 PIPE FLY'S JNOS.

[illegible]

MANUFACTURER DATA			
MFR. NAME: _____			
STREET / P.O. BOX: _____			
CITY: _____		STATE: _____	ZIP: _____
TELEPHONE No.: (    ) _____		FAX No.: (    ) _____	
ENGINEERING CONTACT: _____			
MFR. SERIAL No.: _____		SHOP ORDER No.: _____	
MFR. DWG. No.: _____		REV.: _____	

[illegible]

 <b>Vopak</b> <b>INDUSTRIAL SERVICES</b>		2759 Battleground Road Deer Park, Texas 77536 (281) 604-6150	
ENGINEER		H & M DESIGN, INC. 8602 SPENCER HWY. LA PORTE, TEXAS 77571	PH # (281) 930-8750 FAX # (281) 930-8711 E-MAIL hnm@hmdesigninc.com
DRAWN BY:	DATE	PROJ. ENG.:	
JS	2/24/00		
CHECKED BY:		VOPAK ENG.:	SCALE:
		P. SMOLEN	N.T.S.
H&M JOB #:		ENGINEER JOB NO.	
JOE			

## REPORTS FOR RCRA PART "B"

TANK 05-T-9A - PLAN AND ELEVATION

### PROCESS HOLDING/PRETREATMENT

NOR #35

Shf. size: D	ACad File Name: 05-60-T-09A-1-REV1.DWG	Drawing Number: 05-60-T-9A-1	Rev. 1
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API STD 650 STORAGE TANK CONTRACT No. 3613  
API REVISION 3 TANK No. T-9B  
EDITION - 6TH YR. 1980  
NOM. DIA. 15' HEIGHT - 16'  
DESIGN SPECIFIC GRAVITY - 1 PRESS. -  
MAX. OPERATING TEMP. 200° F  
NOMIAL CAPACITY 21,000 GAL.  
MATL. A-283 C  
MFG.  
CHICAGO BRIDGE AND IRON

#### MATERIALS OF CONSTRUCTION

	VESSEL OR SHELL SIDE	JACKET OR TUBE SIDE
SHELL	CARBON STEEL	
HEADS	CARBON STEEL	
FLANGES		
NOZZLE NECKS		
VESSEL SUPPORTS		
EXTERNAL BOLTS		
NUTS		
INTERNAL BOLTS		
NUTS		
GASKETS		

#### DESIGN CONDITIONS

DESIGN PRESS.	200° F
DESIGN TEMP.	17.5 psia PRESS. VAL.
OPERATING PRESS.	AMR
OPERATING TEMP.	
CORR. ALLOWED	API 650
CODE	
CODE STAMP	
STRESS STAMP	
STRESS RELIEF	
RADIOGRAPH	
JOINT EFF.	
HYDRO TEST	
SP. GR. CONTENTS	

#### CAPACITIES AND WEIGHTS

OPERATING CAP.	21,000 GAL.	CU. FT.
FULL CAPACITY		
EMPTY WEIGHT	105,000 LBS.	LBS.
OPERATING WEIGHT		

#### NOZZLE SCHEDULE

MARK	No.	SIZE	RATING	FACING	"T"	O.S. PROJ.	TYPE	SERVICE
S1	1	4"	150	RF	7 1/2"			SUMP DRAFF
S2	1	6"	150	RF	9"			SAMPLE
S3	1	4"	150	RF	7 1/2"			TRUCK LINE
S4	1	6"	150	RF	9"			OVERFLOW
S5	1	6"	150	RF	7 1/2"			TEMPERATURE INDICATOR
S6	1	6"	150	RF	9"			TRANSFER LINE
S7	1	4"	150	RF	7 1/2"			SPARE W/ BLIND
S8	1	2"	150	RF	6"			WIDENING
R9	1	8"	150	RF				GAUGE WATCH
R10	1	1"	150	RF				SPARE W/ BLIND
R11	1	2"	150	RF				HI LEVEL
R12	1	4"	150	RF				VAPOR CONTROL / VENT
R13	1	6"	150	RF				SPARE W/ BLIND
MW1	1	24"	150	API	8"			MANWAY
MW2	1	24"	150	API	8"			MANWAY w/ EMERGENCY BLOWOFF

#### GENERAL NOTES

- SURFACE PREPARATION - NEAR WHITE METAL BLAST SSPC-SP-10-1988.
- PAINTING: SHELL & ROOF - ZINC/EPXY/POLYURETHANE
- LIST OF APPLICABLE VOPAK STANDARDS AND SPECS. SPECIFICATION NO'S: 08100, 08210, 01800

#### VOPAK REFERENCE DATA

PURCH. ORDER No.	PURCH. ORDER DATE	1980
ITEM NUMBER	ASSET NUMBER	ITEM NUMBER

#### MANUFACTURER DATA

MFR. NAME:	
STREET / P.O. BOX:	
CITY:	STATE: ZIP:
TELEPHONE No.:	FAX No.:
ENGINEERING CONTACT:	
MFR. SERIAL No.:	SHOP ORDER No.:
MFR. DWG. No.:	REV.:

CEA-00-N/A

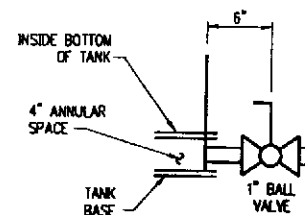
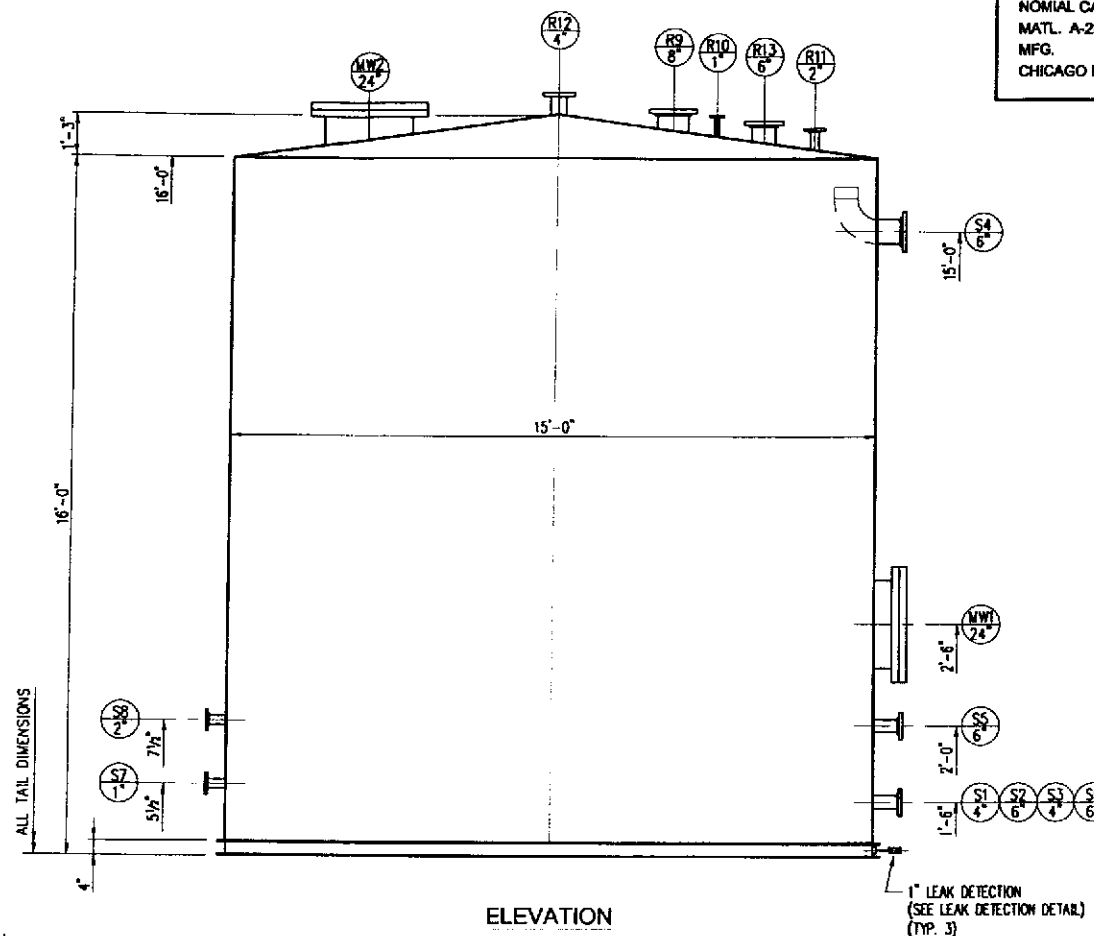
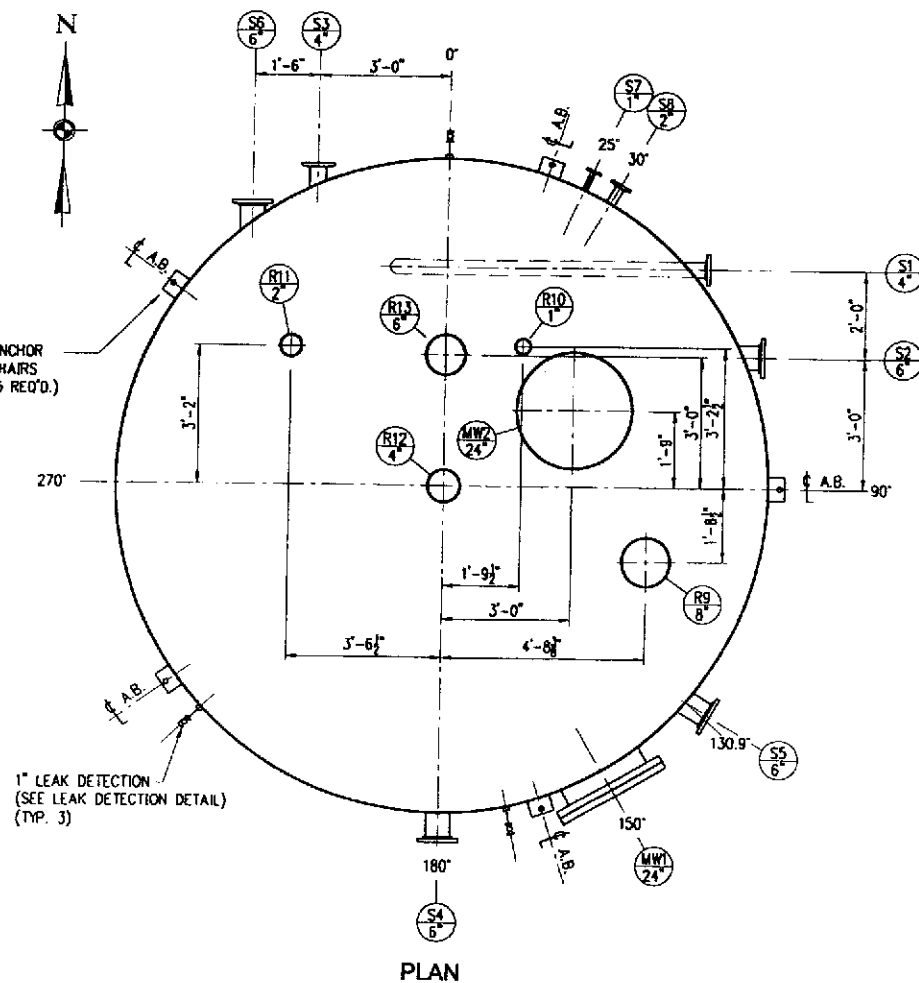
AS BUILTS

05-T-9B PLAN AND ELEVATION

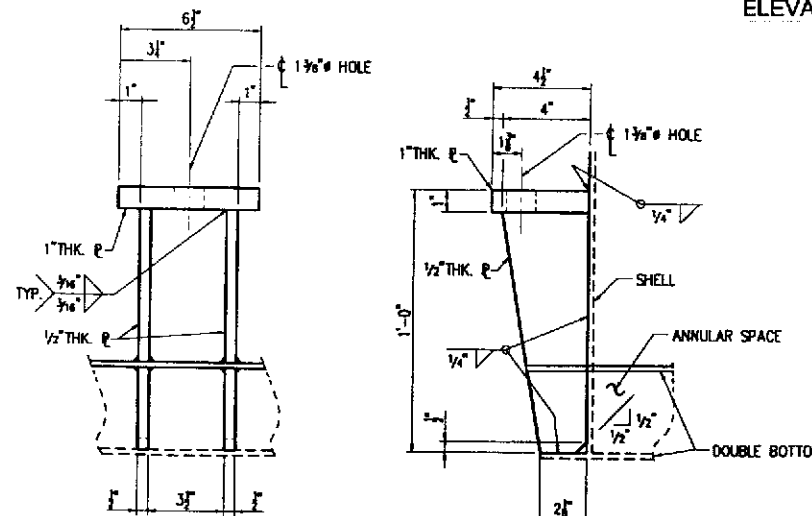
PROCESS HOLDING / PRE-TREATMENT

NOR# 36

Sht. size:	ACad File Name:	Drawing Number:	Rev.
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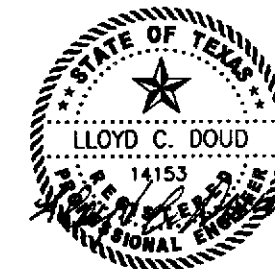
LEAK DETECTION DETAIL



ANCHOR CHAIRS  
(5) REQ'D

#### NOTE:

THIS DRAWING REDRAWN FROM EXISTING PETROMAS INCORPORATED DRAWING NO. 9001-REV D. MATERIAL OF CONSTRUCTION & DESIGN CONDITION SHOWN ABOVE ARE REFERENCED FROM THIS DRAWING & NAME PLATE ON TANK.



This Seal dated 9-18-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

**Vopak**  
INDUSTRIAL SERVICES

2759 Bottleground Road  
Deer Park, Texas 77536  
(281) 604-6150

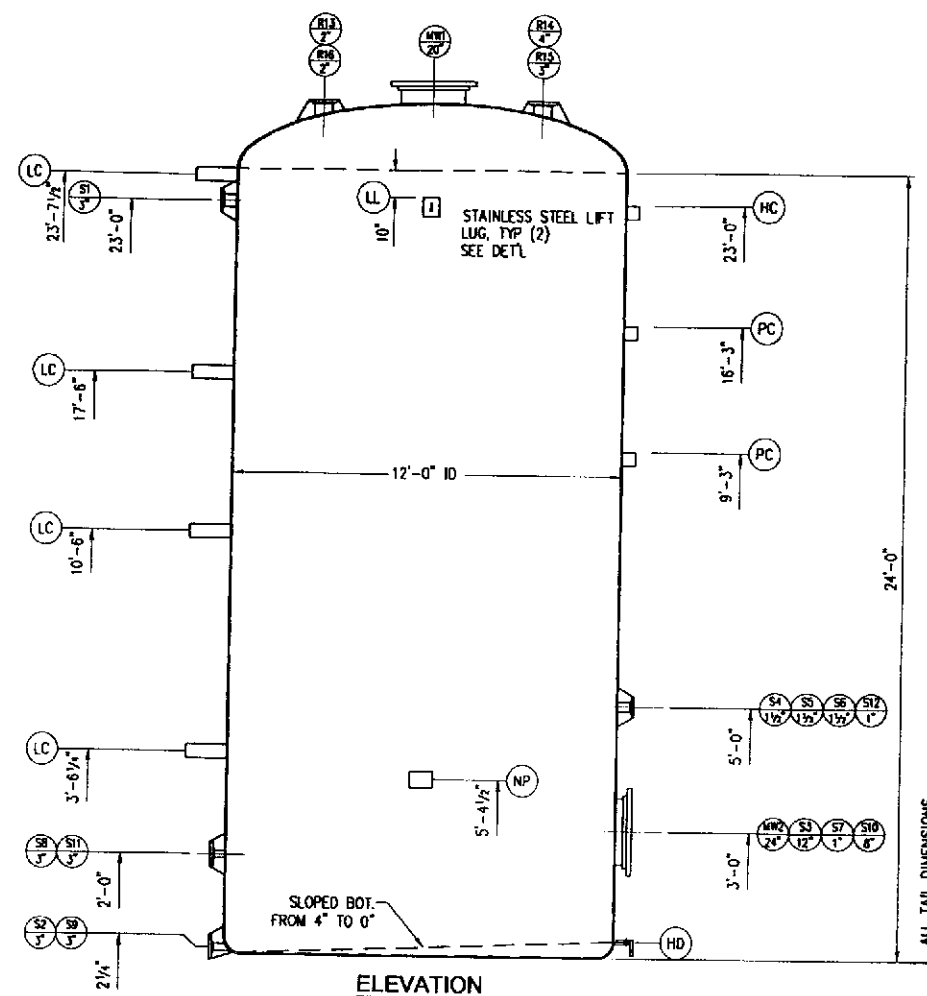
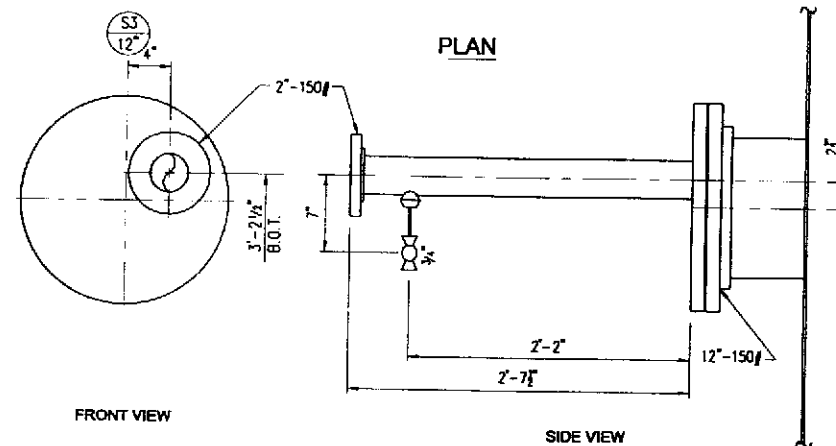
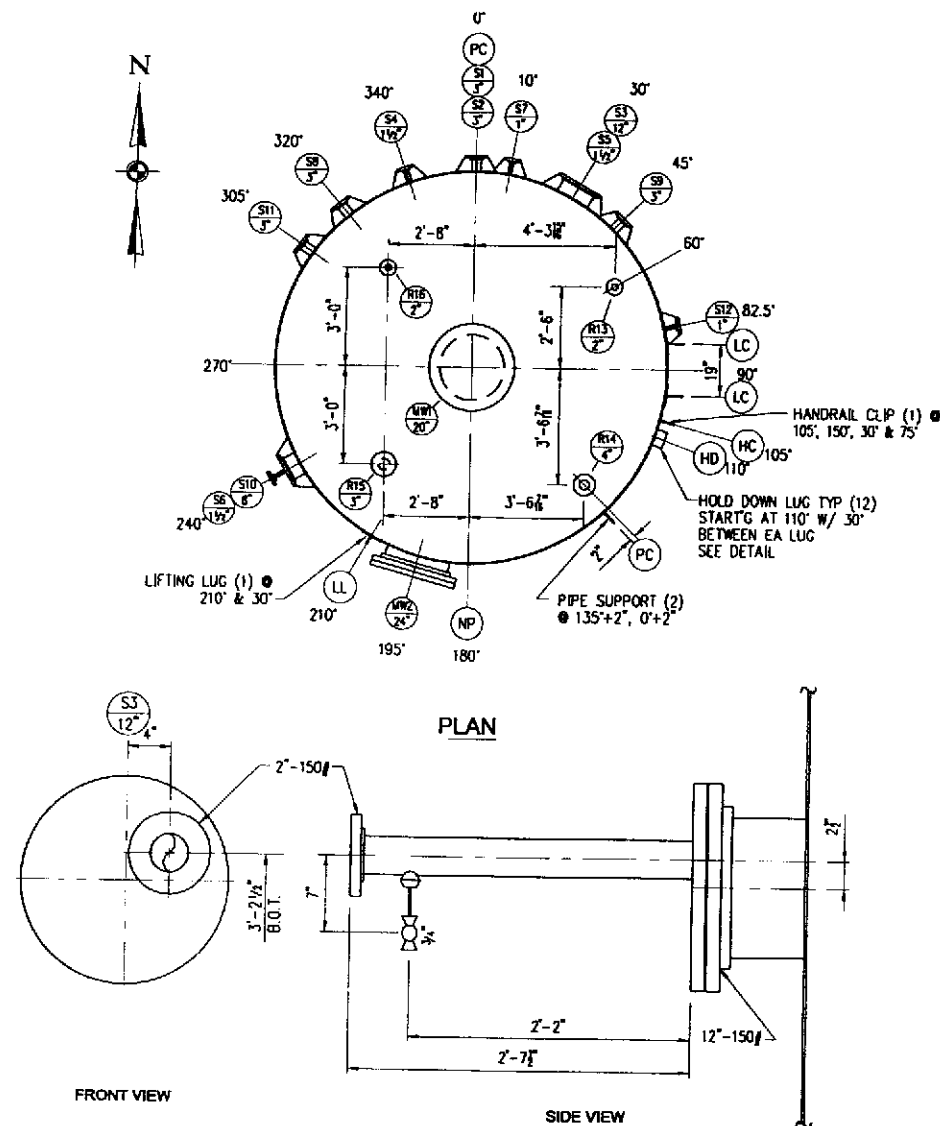
ENGINEER: H & M DESIGN, INC.  
8602 SPENCER HWY.  
LA PORTE, TEXAS 77571  
PH # (281) 930-8750  
FAX # (281) 930-8711  
E-MAIL: hnm@hnmdesign.com

DRAWN BY: TEH DATE: 08/15/02  
CHECKED BY: P. SMOLEN  
H&M JOB #: 1160-VI

PROJ. ENG.:  
VOPAK ENG.: P. SMOLEN  
ENGINEER JOB NO.

SCALE: N.T.S.

NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	DRAWING NUMBER	REFERENCE DRAWINGS
0	FIELD VERIFIED & REDRAWN ON CAD	8/02	TEH					01-10-0001	DISPOSAL PLOT PLAN
								9001	PETROMAS INCORPORATED - T-9B TANK OUTLINE
								D-10380	BAKER TANK - 15'-0" DIA - 0" TOP RING w/ CONNECTIONS
								05-10-0016	DISPOSAL SITE PLAN - COATINGS



MATERIALS OF CONSTRUCTION	
	VESSEL OR SHELL SIDE
SHELL	FRP (FURAN)
HEADS	FRP
FLANGES	FRP
NOZZLE NECKS	FRP
VESSEL SUPPORTS	304 SS
EXT. BOLTS/NUTS	304 SS
INT. BOLTS/NUTS	N/A
GASKETS	1/8 NAT. RUBBER
CATALYST SYSTEMS	
LINER	
RESIN	QUACORR 1001
RE-INFORCEMENT	C-VEIL
THICKNESS	200 MIL
STRUCTURAL	
RESIN	QUACORR 1001
MATERIAL	55° WINDING GLASS ANGLE
THICKNESS	0"-7"=3", 7"-15"=3", 15"-24"=3"
DESIGN CONDITIONS	
DESIGN PRESS.	ATMOS.
DESIGN TEMP.	250° F
OPERATING PRESS.	-----
OPERATING TEMP.	-----
CORR. ALLOW.	0.200
CODE	ASTM D-3299
HYDRO TEST.	WATER (4 HRS @ ATMOS)
SP. GR. CONTENTS	1.0
WIND	100 MPH
SEISMIC	0
CAPACITIES AND WEIGHTS	
OPERATING CAP	19,990 GAL
FULL CAPACITY	N/A
WEIGHT	15,000 LBS
OPERATING WEIGHT	218,225 LBS

FABRICATOR: INDUSTRIAL PIPE AND PLASTICS  
CUSTOMER: EMPAK, INC.  
CUST. P.O. NO.: 931771  
DES. PRES.: ATMOS.  
DES. VAC.: NONE  
DES. TEMP.: 250F  
VOLUME: 19,990 GAL  
DATE BUILT: JAN 1994

GENERAL NOTES

1. ALL FRP FLANGES ARE FLAT FACED.
2. GLASS CONTENT OF LINER TO BE 20 - 31% MIN. BY WEIGHT
3. GLASS CONTENT OF SHELL TO BE 63% MIN. BY WEIGHT
4. COLOR - NATURAL
5. INSULATION: POLYISOCYANURATE W/ 0.024 STUCCO ALUMINUM
6. LEAK DETECTION VIA V-NOTCH IN FOUNDATION.

MARK #	REQ'D NO.	NOZ I.D. (d)	RATING (PSIG)	NOZ PROJ. (PROJ)	REMARKS
S1	1	3	100	6	OVERFLOW W/ BLD. FLC.
S2	1	3	100	6	DISCHARGE VALVE
S3	1	12	100	6	STEAM (SEE DETAILS)
S4	1	1 1/2	100	6	TEMPERATURE
S5	1	1 1/2	100	6	CAUSTIC
S6	1	1 1/2	100	6	TRANSFER (LOW pH)
S7	1	1	100	6	ACID LINE
S8	1	3	100	6	TRUCK PAD
S9	1	3	100	6	LOW SUCTION / RECIRCULATION
S10	1	8	100	6	SPARE (SEE DETAIL)
S11	1	3	100	6	LOW pH
S12	1	1	100	6	SAMPLE
R13	1	2	100	6	VENT
R14	1	4	100	6	VAPOR CONTROL
R15	1	3	100	6	GAUGE HATCH
R16	1	2	100	6	HIGH LEVEL ALARM
MW1	1	20	15	8	MANWAY W/ EMERGENCY BLOWOFF
MW2	1	24	15	8	SIDE MANWAY W/ COVER
NP	1				NAME PLATE
LC	8				LADDER CLIP
HC	4				HAND RAIL CLIP
LL	2				LIFTING LUG
HD	12				HOLD DOWN
PC	4				PIPE SUPPORT CLIP

This Seal dated 9-18-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).


**NOTE:**

THIS DRAWING REDRAWN FROM EXISTING INDUSTRIAL PIPE & PLASTICS, INC.  
DRAWING NO. 11686. MATERIAL OF CONSTRUCTION & DESIGN CONDITIONS SHOWN  
ARE REFERENCED FROM THIS DRAWING.

[illegible]

**Vopak**  
INDUSTRIAL SERVICES

2759 Battleground Road  
Deer Park, Texas 77536  
(281) 604-6150

ENGINEER		 H & M DESIGN, INC. 8602 SPENCER HWY. LA PORTE, TEXAS 77571		PH: (281) 830-8750 FAX: (281) 830-8711 E-MAIL: hnm@hnm-design.com	
DRAWN BY: TEH		DATE: 08/02		PROJ. ENG.:	
CHECKED BY:				VOPAK ENG.: PAM SMOLLEN SCALE: N.	
H&M JOB #:				ENGINEER JOB NO.:	

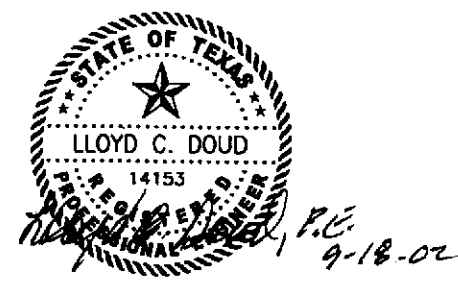
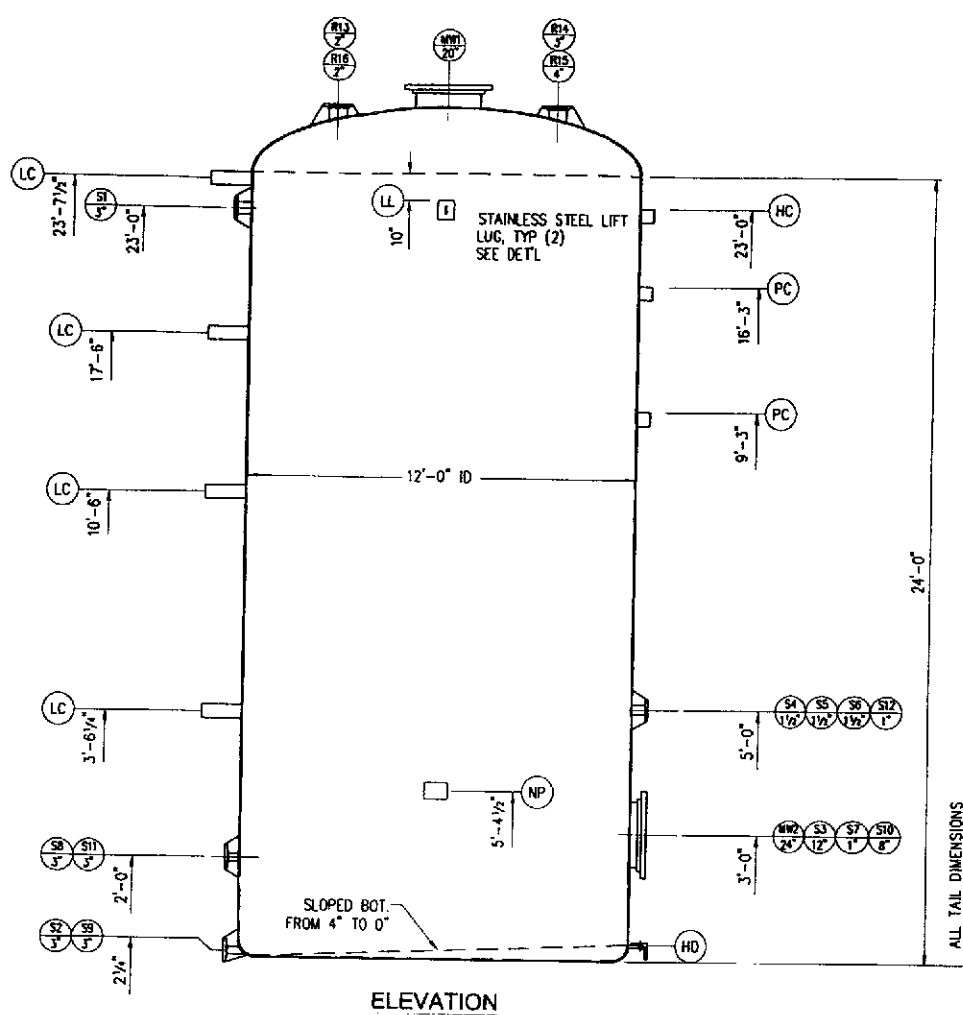
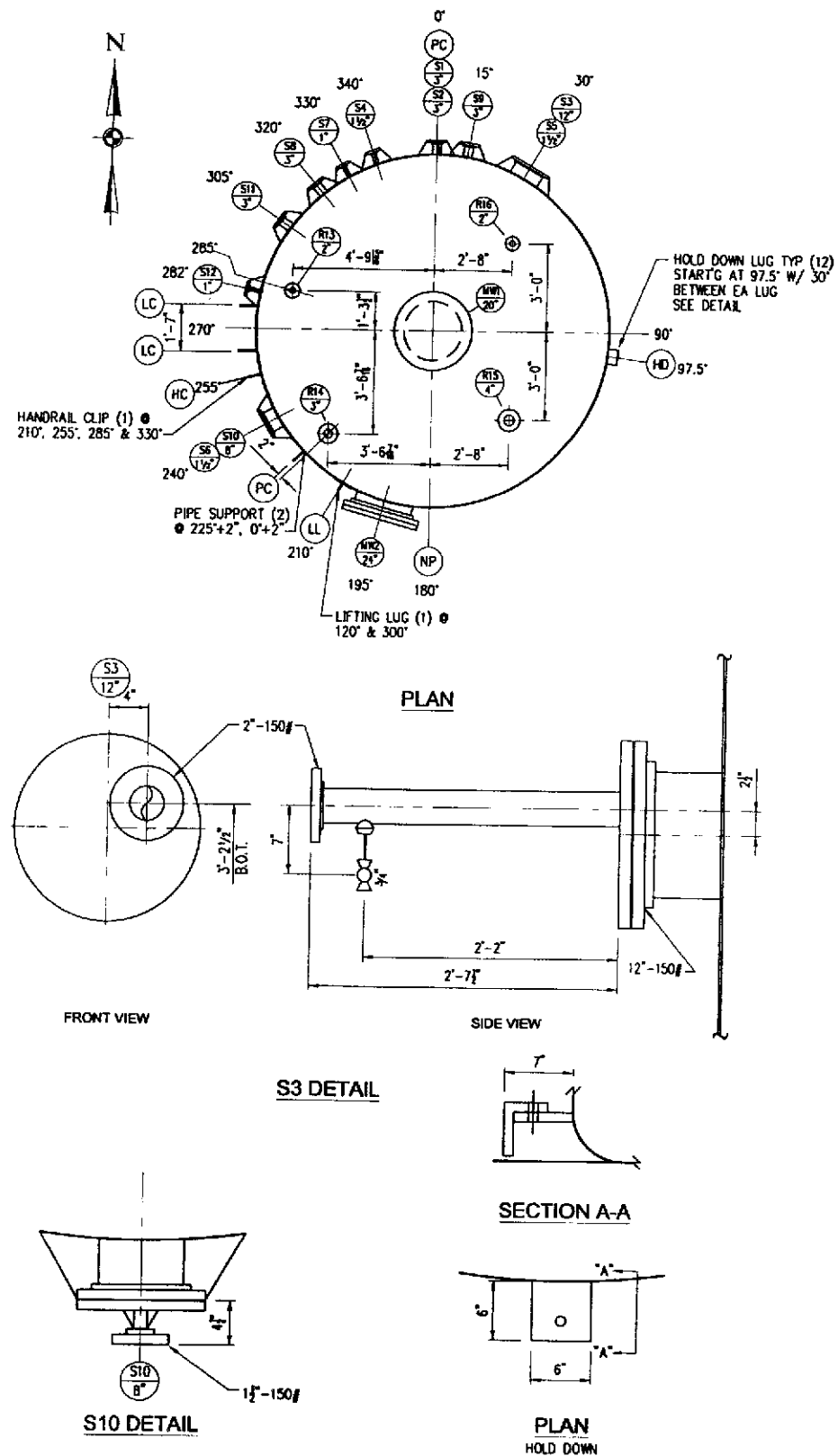
AS BUILTS

05-T-21 - PLAN AND ELEVATION

EOTS

NOR #38

Sht. size:	ACad File Name:	Drawing Number:	Rev.
D	05-60-T-21-1-REV0.DWG	05-60-T-21-1	0



This Seal dated 9-18-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

NOTE:  
THIS DRAWING REDRAWN FROM EXISTING INDUSTRIAL PIPE & PLASTICS, INC. DRAWING NO. 11686. MATERIAL OF CONSTRUCTION & DESIGN CONDITIONS SHOWN ARE REFERENCED FROM THIS DRAWING.

MATERIALS OF CONSTRUCTION	
SHELL	FRP (FURAN)
HEADS	FRP
FLANGES	FRP
NOZZLE NECKS	FRP
VESSEL SUPPORTS	304 SS
EXT. BOLTS/NUTS	304 SS
INT. BOLTS/NUTS	N/A
GASKETS	1/8 NAT. RUBBER
CATALYST SYSTEMS	
LINER	
RESIN	QUACORR 1001
RE-INFORCEMENT	C-VEIL
THICKNESS	200 MIL
STRUCTURAL	
RESIN	QUACORR 1001
MATERIAL	55 WINDING GLASS ANGLE
THICKNESS	0'-7-3/4 7'-15-3/4 15'-24'-3/4
DESIGN CONDITIONS	
DESIGN PRESS.	ATMOS.
DESIGN TEMP.	250° F
OPERATING PRESS.	-----
OPERATING TEMP.	-----
CORR. ALLOW.	0.200
CODE	ASTM D-3299
HYDRO TEST.	WATER (4 HRS @ ATMOS)
SP. GR. CONTENTS	1.0
WIND	100 MPH
SEISMIC	0
CAPACITIES AND WEIGHTS	
OPERATING CAP	19,990 GAL
FULL CAPACITY	N/A
EMPTY WEIGHT	15,000 LBS
OPERATING WEIGHT	218,225 LBS

FABRICATOR: INDUSTRIAL PIPE AND PLASTICS  
 CUSTOMER: EMPAK, INC.  
 CUST. P.O. NO.: 931771  
 DES. PRES.: ATMOS.  
 DES. VAC.: NONE  
 DES. TEMP.: 250F  
 VOLUME: 19,990 GAL  
 DATE BUILT: APR 1994

GENERAL NOTES  
 1. ALL FRP FLANGES ARE FLAT FACED.  
 2. GLASS CONTENT OF LINER TO BE 20 - 31% MIN. BY WEIGHT  
 3. GLASS CONTENT OF SHELL TO BE 63% MIN. BY WEIGHT  
 4. COLOR - NATURAL  
 5. INSULATION: POLYISOCYANURATE W/ 0.024 STUCCO ALUMINUM.  
 6. LEAK DETECTION VIA V-NOTCH IN FOUNDATION.

MARK #	RECD NO.	NOZ. I.D. (d)	RATING (PSIG)	NOZ. PROJ. (PROJ)	REMARKS
S1	1	3	100	6	OVERFLOW W/ BLD. FLG.
S2	1	3	100	6	DISCHARGE VALVE
S3	1	12	100	6	STEAM (SEE DETAIL)
S4	1	1 1/2	100	6	THERMOMETER
S5	1	1 1/2	100	6	CAUSTIC
S6	1	1 1/2	100	6	TRANSFER (LOW pH)
S7	1	1	100	6	ACID LINE
S8	1	3	100	6	TRUCK PAD
S9	1	3	100	6	LOW SUCTION / RECIRCULATION
S10	1	8	100	6	SPARE (SEE DETAIL)
S11	1	3	100	6	LOW pH
S12	1	1	100	6	SAMPLE
R13	1	2	100	6	VENT
R14	1	3	100	6	VAPOR CONTROL
R15	1	4	100	6	GAUGE HATCH
R16	1	2	100	6	HIGH LEVEL ALARM
MW1	1	20	15	8	MANWAY W/ EMERGENCY BLOWOFF
MW2	1	24	15	8	SIDE MANWAY W/ COVER
NP	1				NAME PLATE
LC	8				LADDER CLIP
HC	4				HAND RAIL CLIP
LL	2				LIFTING LUG
HD	12				HOLD DOWN
PC	4				PIPE SUPPORT CLIP

NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	DRAWING NUMBER	REFERENCE DRAWINGS
0	FIELD VERIFIED & REDRAWN ON CAD	9/02	TEH					01-10-0001	DISPOSAL PLOT PLAN
								11686	12'-0" x 24'-0" FURAN TANKS
								05-10-0016	DISPOSAL SITE PLAN - COATINGS

2759 Battleground Road  
Deer Park, Texas 77536  
(281) 604-6150

ENGINEER H & M DESIGN, INC.  
8602 SPENCER HWY.  
LA PORTE, TEXAS 77551

PH # (281) 930-8750  
FAX # (281) 930-8711  
E-MAIL: hnm@hnmdesigninc.com

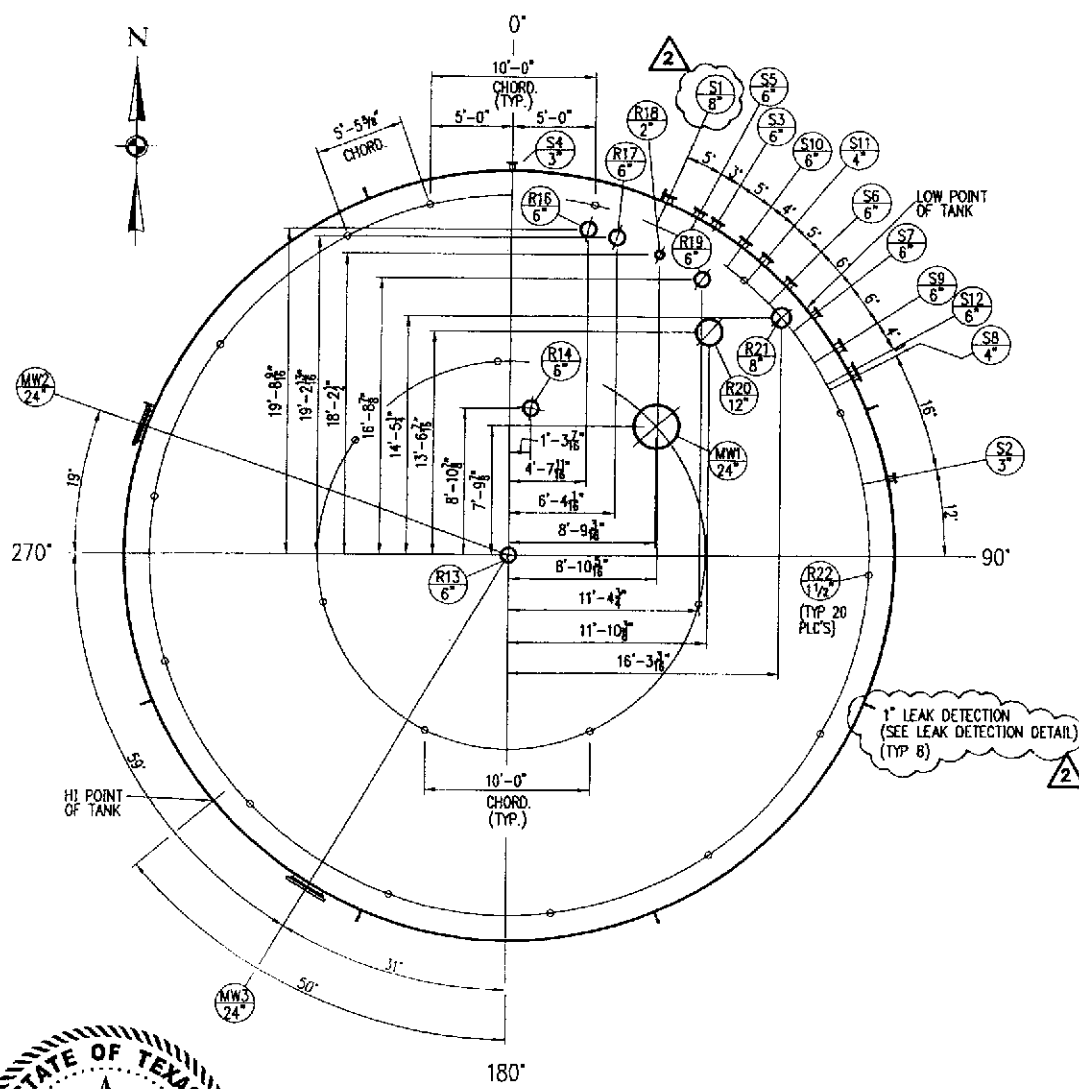
DRAWN BY: TEH DATE 08/02

CHECKED BY: PAM SMOLLEN N.T.S.

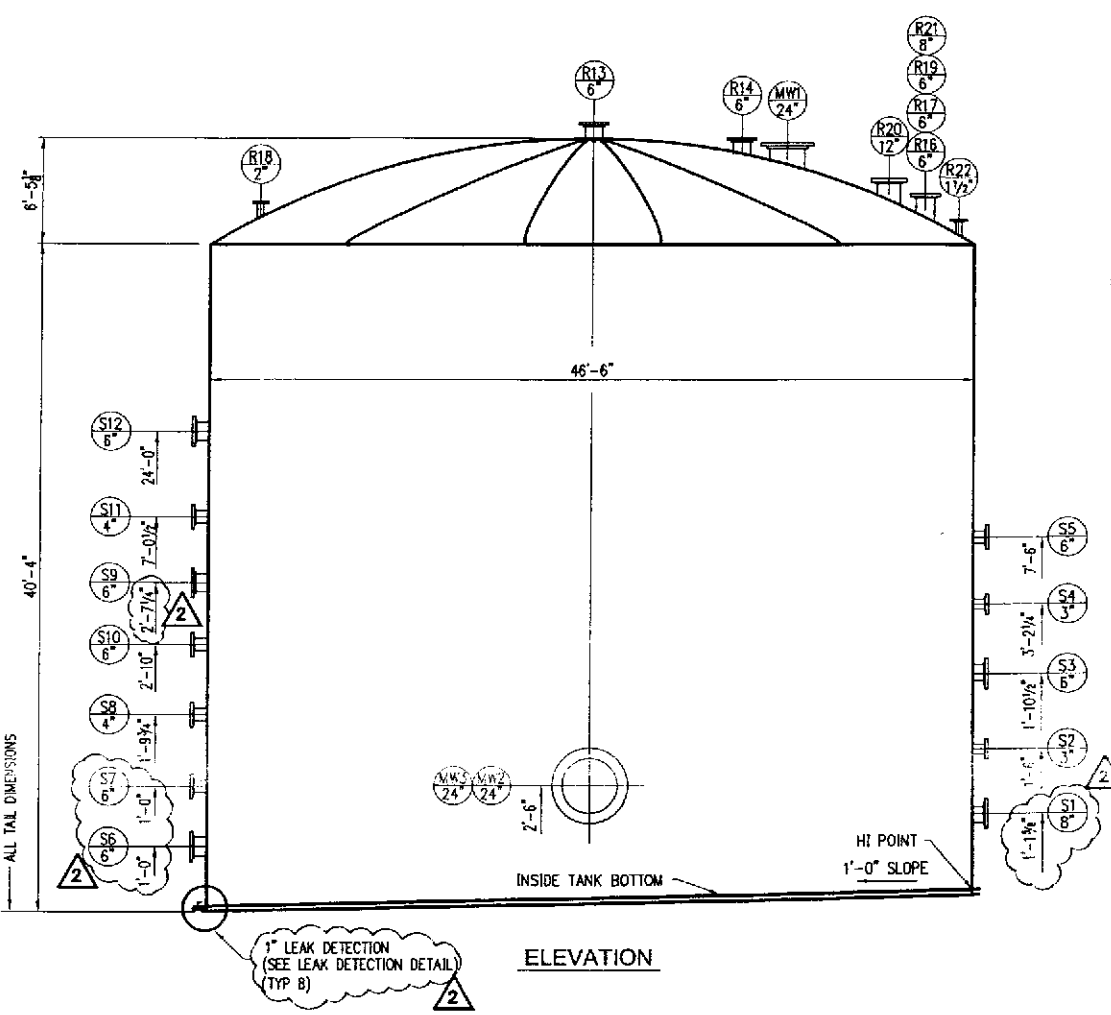
H&M JOB #: 1180-VI

PROJ. ENG.: VOPAK ENG. SCALE: ENGINEER JOB NO. -PD

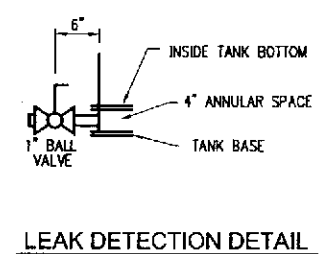
CEA-00-NO		AS BUILTS	
		05-T-22 - PLAN AND ELEVATION	
		EOTS	
NOR #39			
Sht. size: D	ACad File Name: 05-60-T-22-1-REV0.DWG	Drawing Number: 05-60-T-22-1	Rev. 0



PLAN



ELEVATION



LEAK DETECTION DETAIL

MATERIALS OF CONSTRUCTION		
	VESSEL OR SHELL SIDE	JACKET OR TUBE SIDE
SHELL	A36	
HEADS		
FLANGES	A105	
NOZZLE NECKS	A106B / ROOF A536	
VESSEL SUPPORTS		
EXTERNAL BOLTS		
EXTERNAL NUTS		
EXTERNAL BOLTS		
EXTERNAL NUTS		
GASKETS		

DESIGN CONDITIONS		
DESIGN PRESS.	5" H <sub>2</sub> O	
DESIGN TEMP.	< 200°	
OPERATING PRESS.	A105	
OPERATING TEMP.	180°	
CORR. ALLOWED	0	
CODE	API 650, APP F	
CODE STAMP		
STRESS STAMP		
STRESS RELIEF		
RADIOGRAPH		
JOINT EFF.		
HYDRO TEST	PER API 650	
SP. SR. CONTENTS	11	

CAPACITIES AND WEIGHTS		
OPERATING CAP.	504,000 GAL.	CU. FT.
FULL CAPACITY		
EMPTY WEIGHT		
OPERATING WEIGHT		

NOZZLE SCHEDULE									
MARK	No.	SIZE	RATING	FACING	"T"	O.S. PROJ.	TYPE	SERVICE	
S1	1	8"	150	RFSD	6"			RECIRCULATION	
S2	1	3"	150	RFSD	6"			120 IN	
S3	1	6"	150	RFSD	6"			3" SUCTION	
S4	1	3"	150	RFSD	6"			SPARE	
S5	1	6"	150	RFSD	6"			ACID	
S6	1	6"	150	RFSD	6"			2" SUCTION	
S7	1	6"	150	RFSD	6"			STEPP LINE OUT	
S8	1	4"	150	RFSD	6"			PROCESS INLET	
S9	1	6"	150	RFSD	6"			STEAM INLET	
S10	1	6"	150	RFSD	6"			4" SUCTION	
S11	1	4"	150	RFSD	6"			SPARE	
S12	1	6"	150	RFSD	6"			20" SUCTION	
R13	1	6"	150	RFSD	6"			PANTERS HUB/VENT	
R14	1	6"	150	RFSD	6"			PV/RV	
R16	1	6"	150	RFSD	6"			SPARE WITH BLIND	
R17	1	6"	150	RFSD	6"			TEMPERATURE	
R18	1	2"	150	RFSD	6"			HIGH LEVEL	
R19	1	8"	150	RFSD	6"			SPARE W/BLIND	
R20	1	12"	150	RFSD	6"			LEVEL	
R21	1	8"	150	RFSD	6"			SAUCE MATCH	
R22	20	1 1/2"	3000	RFSD	6"			CABLE COUPLING (S.S.)	
MW1	1	24"	150	RFSD	6"			ROOF MANWAY W/EMERG. BLOWOFF	
MW2	1	24"	150	RFSD	6"				
MW3	1	24"	150	RFSD	6"				

**GENERAL NOTES**

- SURFACE PREPARATION: NEAR WHITE METAL BLAST SSPC-SP-10-1989.
- PAINTING: ROOF - ZINC, EPOXY, POLYURETHANE. SHELL - EPOXY, PHENOLIC.
- INSULATION: POLY ISOCYANURATE W/0.024 STUCCO ALUMINUM.
- LIST OF APPLICABLE VOPAK STANDARDS AND SPECS. SPECIFICATION NO'S: 05100, 05210, 01800, 05240.

VOPAK REFERENCE DATA			
PURCH. ORDER No.	ASSET NUMBER	PURCH. ORDER DATE	ASSET NUMBER
ITEM NUMBER		ITEM NUMBER	
MANUFACTURER DATA			
MFR. NAME: PASADENA TANK			
STREET / P.O. BOX:		STATE:	ZIP:
CITY:			
TELEPHONE No.:		FAX No.:	
ENGINEERING CONTACT:			
MFR. SERIAL No.:		SHOP ORDER No.:	
MFR. DWG. No.:		REV.:	

CEA-03-086

This Seal dated 3/18/03 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Drue T. Talley, P.E. #28917).

**NOTE:**  
THIS DRAWING REDRAWN FROM EXISTING PASADENA TANK CORPORATION DRAWING NO. 20056-ED2 AND CUST-O-FAB TANK SERVICES FLOOR REPLACEMENT DRAWINGS. MATERIAL OF CONSTRUCTION & DESIGN CONDITIONS SHOWN ABOVE ARE REFERENCED FROM THIS DRAWING & NAMEPLATE ON TANK.

FLOOR	SHELL/BTM.	ROOF
VOPAK DEER PARK, TX	VOPAK DEER PARK, TX	VOPAK DEER PARK, TX
NATIONAL BOARD No.	NATIONAL BOARD No.	NATIONAL BOARD No.
EQUIP. MFR. CUST-O-FAB	EQUIP. MFR. MATRIX	EQUIP. MFR. PASADENA TANK
MFR. S/N 700331	MFR. S/N GC905	MFR. S/N 20056
VOPAK P.O. No. 86280140	VOPAK P.O. No. 11/95	VOPAK P.O. No. 201138
P.O. ORDER DATE 6/2003	P.O. ORDER DATE 11/95	P.O. ORDER DATE 8/14/00
YEAR BUILT 2003	YEAR BUILT 1996	YEAR BUILT 2000
VOPAK ASSET No.	VOPAK ASSET No.	VOPAK ASSET No.
VOPAK INSP. STAMP	VOPAK INSP. STAMP	VOPAK INSP. STAMP
VESSEL JACKET / COIL	VESSEL JACKET / COIL	VESSEL JACKET / COIL
PRESS. TEMP. 5" H <sub>2</sub> O 200°	PRESS. TEMP. 5" H <sub>2</sub> O 200°	PRESS. TEMP. 5" H <sub>2</sub> O 200°
MATLS. OF CONST. A36	MATLS. OF CONST. A36	MATLS. OF CONST. A36
TOTAL CAPACITY 504,000 GAL.	TOTAL CAPACITY 504,000 GAL.	TOTAL CAPACITY 504,000 GAL.
ORIG. NOM. THKS. MIN. ALLOW. THKS.	ORIG. NOM. THKS. MIN. ALLOW. THKS.	ORIG. NOM. THKS. MIN. ALLOW. THKS.
SPECIAL NOTES API 650, APPENDIX F	SPECIAL NOTES API 650	SPECIAL NOTES API 650, APPENDIX F
SHELL TOP HEAD 5/16"	SHELL TOP HEAD 1/4"	SHELL TOP HEAD 1/4"
FLOOR INS. CO.	INS. CO.	INS. CO.

NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY
0	ISSUE FOR CONSTRUCTION	3/28/01	CJD				
1	REVISED AS BUILT	8/22/02	WP				
2	REVISED PER T-563 PRI & SEC FLOOR REPLACEMENT	7/29/03	JAM				

DRAWING NUMBER	REFERENCE DRAWINGS
01-10-0001	DISPOSAL PLOT PLAN
05-30-0022	05-T-563 SYSTEM PMD
20056-ED2	PTC - TANK ORIENTATION
05-10-0016	DISPOSAL SITE PLAN - COATINGS
SP-1	05-T-563 - SPARGER DETAIL
SP-2	05-T-563 - SULFURIC ACID SPARGER DETAIL
SP-3	05-T-563 - RECIRCULATION SPARGER DETAIL
GC700331	CUST-O-FAB T-563 REPAIR REPORT - AUG. 2003

**Vopak LOGISTICS SERVICES**

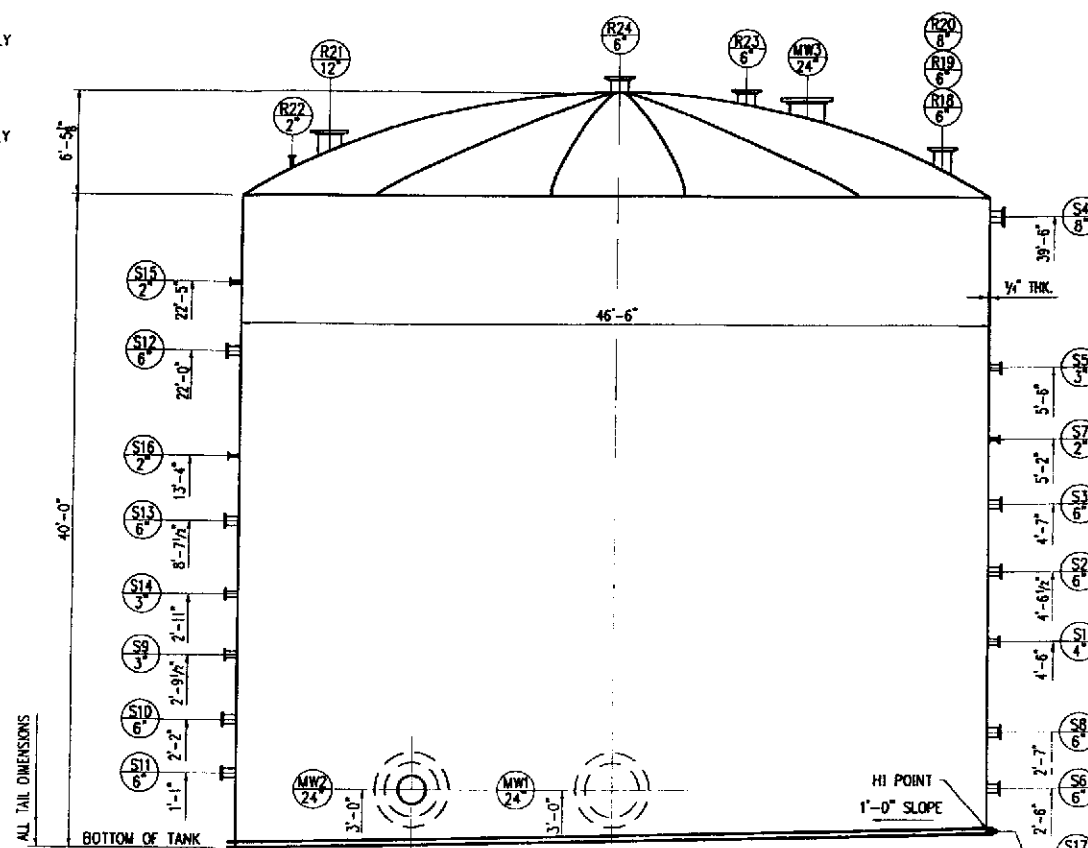
2759 Battleground Road  
Deer Park, Texas 77536  
(281) 604-6150

ENGINEER: H & M DESIGN, INC.  
8602 SPENCER HWY.  
LA PORTE, TEXAS 77571  
PH: (281) 930-8750  
FAX: (281) 930-8711  
E-MAIL: hnm@hnmdesigninc.com

DRAWN BY: CJD DATE: 11/00  
CHECKED BY: LH DATE: 11/00  
H&M JOB #: 780-EM

PROJ. ENG.:  
VOPAK ENG.: SMOLEN  
ENGINEER JOB NO.: -PD

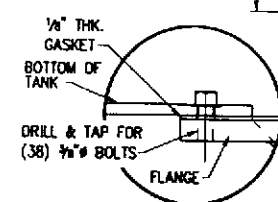
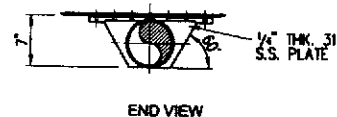
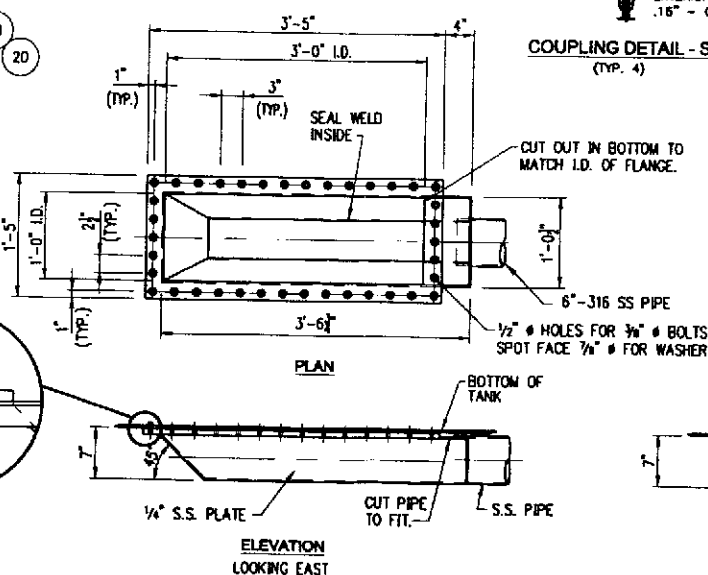
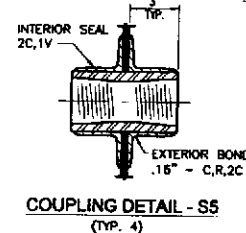
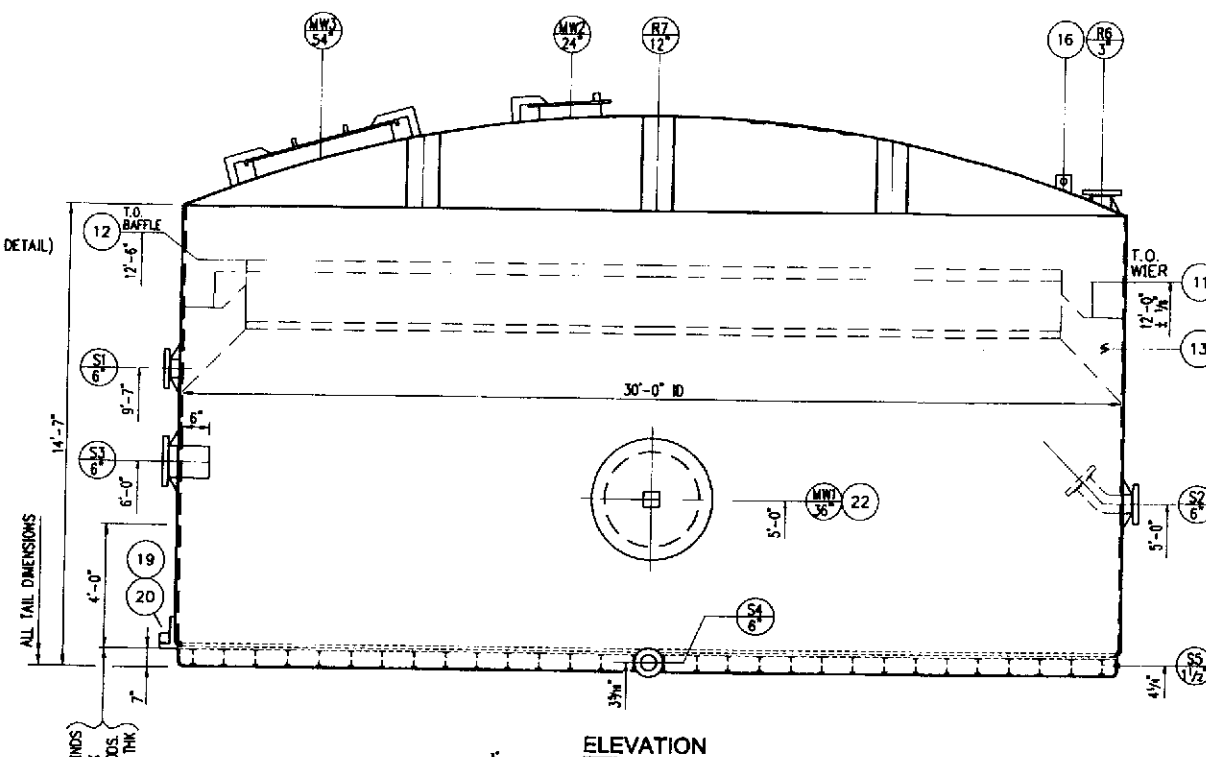
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05-T-563 PLAN & ELEVATION	
PROCESS HOLDING/PRETREATMENT	
NOR #49	
Shl. size: D	ACad File Name: 05-60-T-563-1-Rev2.DWG
Drawing Number: 05-60-T-563-1	Rev.: 2



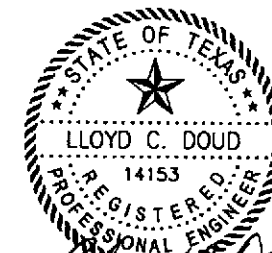
STATE OF TEXAS  
★ ★ ★  
LLOYD C. DOUD  
14153  
REGISTERED  
PROFESSIONAL ENGINEER  
9-19-02

AS-BUILTS			
05-T-567 - PLAN, ELEVATION			
PROCESS HOLDING/PRETREATMENT			
NOR#50			
Sht. size:	ACad File Name:	Drawing Number:	Rev.
D	05-60-T-567-1-rev0.DWG	05-60-T-567-1	0





THIS DRAWING REDRAWN FROM EXISTING TANKINETICS, INC. DRAWING NO. D-6232-1 & EXISTING TANKINETICS, INC. DRAWING NO. C-02-2695-1, REV. 0. MATERIALS OF CONSTRUCTION & DESIGN CONDITIONS SHOWN ABOVE ARE REFERENCED FROM THESE DRAWINGS & NAMEPLATE ON TANK.





This Seal dated 11-21-03 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

NOZZLE SCHEDULE								
MARK	No.	SIZE	RATING	FACING	T"	O.S. PROJ.	TYPE	SERVICE
91	1	6"				6"		EFFLUENT
92	1	6"				6"		SOLIM
93	1	6"				6"		INFLUENT
94	1	6"				6"	NEW	SLUDGE DRAW OFF
95	4	1 1/2"		THRD		6"	NEW	LEAK DETECTION
98	1	3"				6"		VAPOR CONTROL
97	1	1 1/2"				6"		DRIVE
8	1	36"						NEOPRENE GASKET FOR WWR
10	32							CAL. PL. BOLT ASSEMBLY W/ NUTS FOR WWR
11	1							360° EFFLUENT TROUGH
12	1	24"						SOLIM BAFFLE (360°)
13	28							TROUGH & BAFFLE CLUSSETS
14	56							W-13 2 1/2" 1/4" PNC BOLT ASSY. FOR ITEM 15
15	1	6"						360° ADJUSTMENT BAND FOR WWR
16	4							STL. LIFTING PLATE
17	-							
18	-							
19	4	7/8"						GALV. STL. TIE DOWN LUGS
20	4	7/8"						TIE DOWN BARS
21	8	7/8"						PHOSPH. RED HEAD ANCHORS FOR ITEM 19
22	1							SOLIM BARGE PLATE
23	2							PPP HANDLE FOR ITEM 87
24	2							PPP HANDLE FOR ITEM 87
MW1	1	36"				6"		FLED. HAWWAY WITH PL. CLUSSETS
MW2	3	24"				6"		FENCED HAWWAY
MW3	1	54"				2-W		54" SQUARE ACCESS

1. PSP TAP BY ACCORDANCE WITH SPEC MS-15-68, ASTM D-3299.
2. INNER CORROSION BARRIER: DERANAKE 470, REINFORCED WITH 20 MIL "C" GLASS SURFACE VEL.
3. 200 MI. BACKUP
4. 1/2" LAMINATE FABRICATED TO FULL WALL THICKNESS WITH ATLAC 400.
5. EXTERIOR SURFACE FINISHED WITH WHITE PROTECTIVE COATING 9-PH. TEAR-A
6. NOZZLE BOLT HOLES TO STRADDLE PRINCIPLE TANK CENTER LINES (0°-180°; 90°-270°) AXIS AT PLAIN WE.
7. FLANGED NOZZLES ARE 25 PSI RATED WITH 1500# DRILLING.
8. NOZZLE PROJECTIONS ARE 30 IN. BASED WITH 1500# TANK LIFT.
9. ACTUAL EMPTY WEIGHT/INTERVALS AND W/L LEAK DETECTION = 16,000LB.

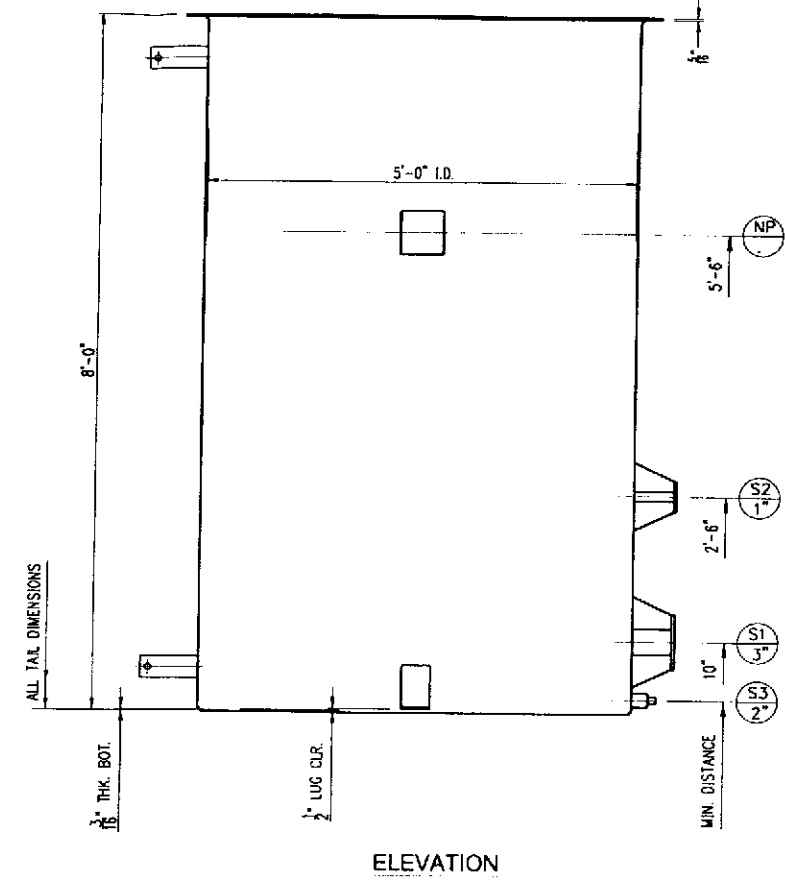
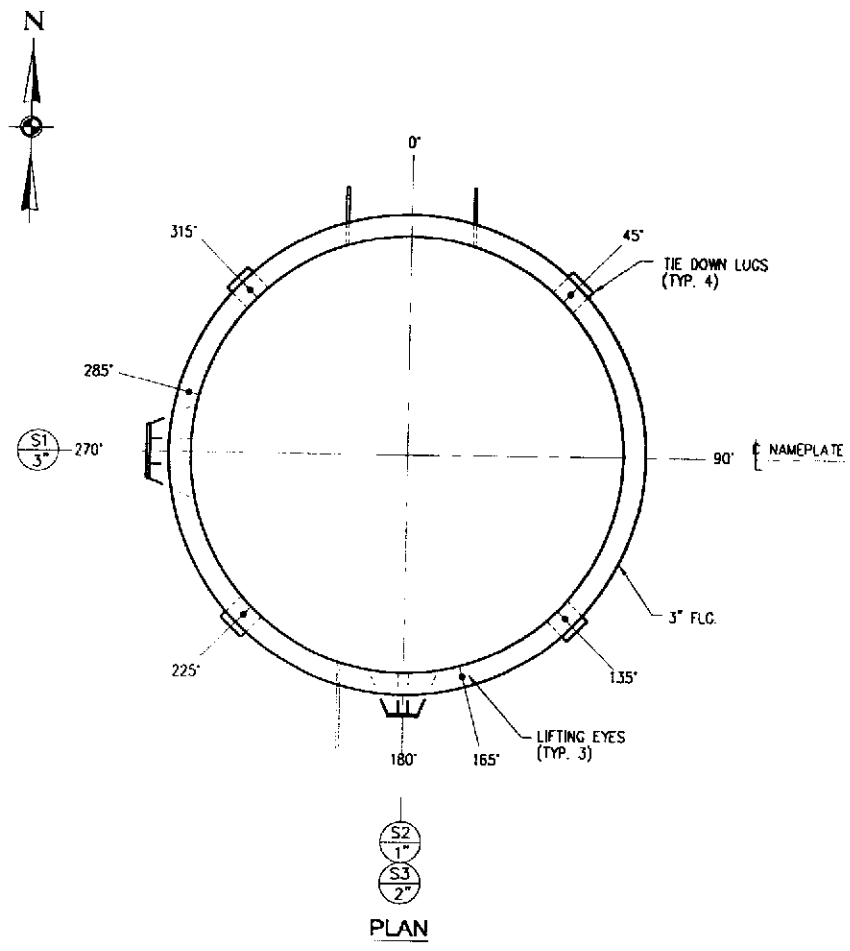
MANUFACTURER DATA			
MFR. NAME: TANNETICS INC.			
STREET / P.O. BOX: 15030 BUCKINGHAM WEST CIRCLE			
CITY: WESTMINSTER		STATE: CA	ZIP: 92681
TELEPHONE No.: (800) 624-2600		FAX No.: (800) 741-3500	
ENGINEERING CONTACT:			
MFR. SERIAL No.:		SHOP ORDER No.:	
MFR. DWG. No.:		REV.:	

CEA-02-023

 <b>Vopak</b> <b>LOGISTICS SERVICES</b>		2759 Battleground Road Deer Park, Texas 77538 (281) 604-6150	
ENGINEER		H & M DESIGN, INC. 8002 SPENCER HWY. LA PORTE, TEXAS 77571	PH # (281) 930-8750 FAX # (281) 930-8711 E-MAIL hnm@hmdesigninc.com
DRAWN BY:	WP	DATE	8/02
CHECKED BY:			
H&M JOB #:	1160-M		
		PROJ. ENG.:	
		VOPAK ENG.:	PAM SMOLEN
		SCALE:	N.T.
		ENGINEER JOB NO.	

Sht. size: D	ACad File Name: 05-60-C-1-1-REV1.DWG	Drawing Number: 05-60-C-1-1	Rev. 1
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MATERIALS OF CONSTRUCTION		
	VESSEL OR SHELL SIDE	JACKET OR TUBE SIDE
SHELL	DERAKANE 470	
HEADS		
FLANGES		
NOZZLE NECKS		
VESSEL SUPPORTS		
INTERNAL BOLTS		
EXTERNAL BOLTS		
NUTS		
GASKETS		

DESIGN CONDITIONS		
DESIGN PRESS.	ATMOS	
DESIGN TEMP.	AMB	
OPERATING PRESS.	ATMOS	
OPERATING TEMP.	AMB	
CORR. ALLOWED		
CODE	NEB PS 15-68	
CODE STAMP		
STRESS RELIEF		
RADIOGRAPH		
JOINT EFF.		
HYDRO TEST		
SP. GR. CONTENTS	1.5	

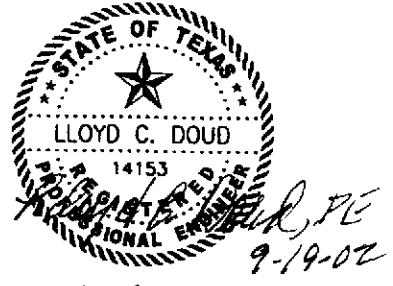
CAPACITIES AND WEIGHTS		
OPERATING CAP.	1175 GAL	
FULL CAPACITY	1175 GAL	
EMPTY WEIGHT	600 LBS	
OPERATING WEIGHT		

NOZZLE SCHEDULE									
MARK	NO.	SIZE	RATING	FACING	"T"	O.S. PROJ.	TYPE	OUTLET	SERVICE
S1	1	3"	150	RF	6"			INLET	
S2	1	1"	150	RF	6"			INLET	
S3	1	2"	3000	PLG				DRUM	

- GENERAL NOTES**
1. TSP TANK IN ACCORDANCE WITH SPEC NEB PS 15-68.
  2. INNER CORROSION BARRIER: DERAKANE 470, REINFORCED WITH 20 MIL NEXUS SURFACE VEL.
  3. 200 MIL BACKUP.
  4. BALANCE OF LAMINATE FABRICATED TO FULL WALL THICKNESS WITH ATLAC 400.
  5. EXTERIOR SURFACE FINISHED WITH WHITE PROTECTIVE COATING, P/N: 17248-A.
  6. NOZZLE BOLT HOLES TO STRADDLE PRINCIPLE TANK CENTER LINES (0°-180°, 90°-270°) AXIS AT PLAN VIEW.
  7. FLANGED NOZZLES ARE 25 PSI RATED WITH 150P DRILLING.
  8. NOZZLE PROJECTIONS ARE FROM INSIDE TANK WALL.
  9. LEAK DETECTION VIA GRATING ON FOUNDATION.

VOPAK REFERENCE DATA			
PURCH. ORDER No.	PURCH. ORDER DATE 1984		
ITEM NUMBER	ASSET NUMBER	ITEM NUMBER	ASSET NUMBER

MANUFACTURER DATA			
MFR. NAME:			
STREET / P.O. BOX:			
CITY:	STATE:	ZIP:	
TELEPHONE No.:	FAX No.:		
ENGINEERING CONTACT:			
MFR. SERIAL No.:	SHOP ORDER No.:		
MFR. DWG. No.:	REV.:		



This Seal dated 9-19-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

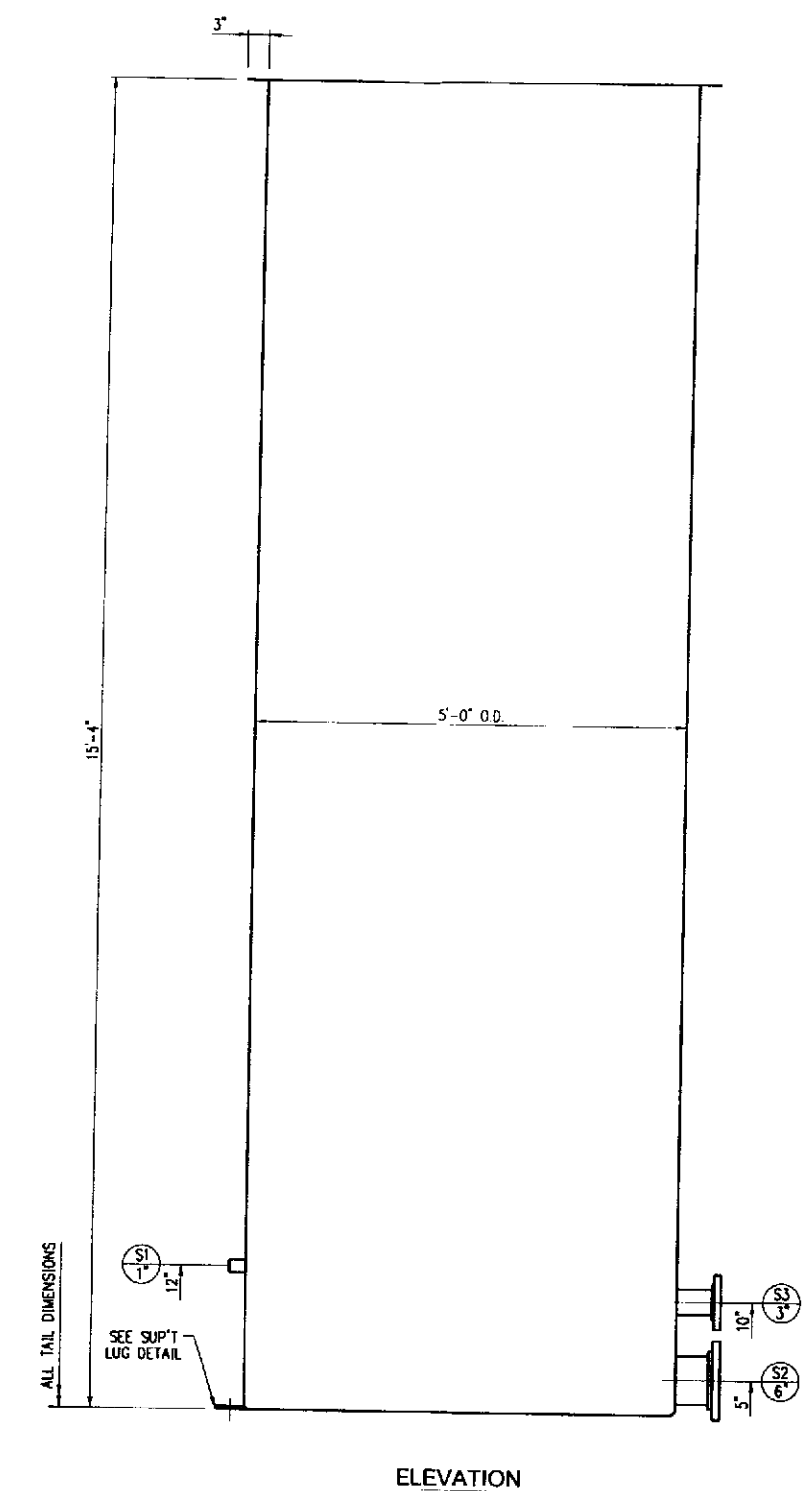
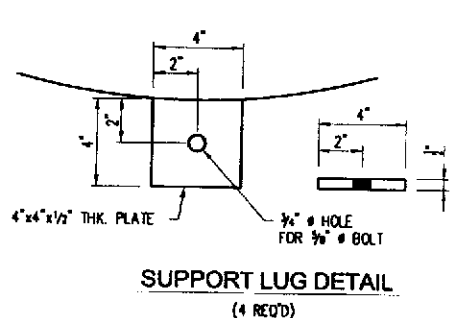
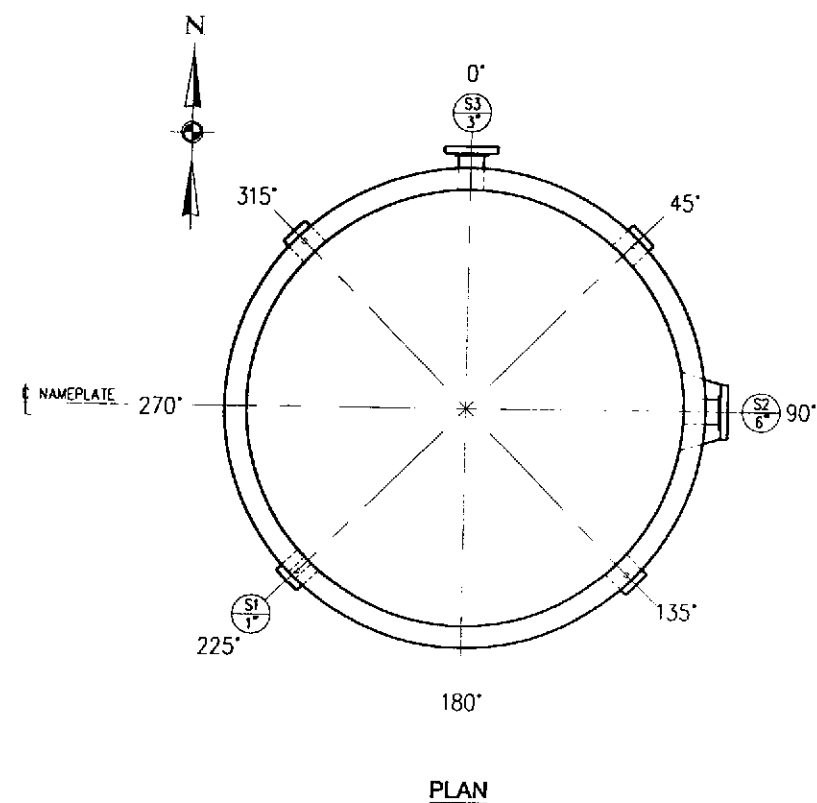
**NOTE:**  
THIS DRAWING REDRAWN FROM EXISTING TANKINETICS, INC. DRAWING NO. C-6255-1. MATERIALS OF CONSTRUCTION & DESIGN CONDITIONS SHOWN ABOVE ARE REFERENCED FROM THIS DRAWING AND NAMEPLATE ON TANK.

<b>VESSEL</b>		VOPAK DEER PARK, TX		NATIONAL BOARD No.	
EQUIP. MFR.	TANKINETICS	MFR. SN			
VOPAK P.O. No.	9-0184	P.O. ORDER DATE		YEAR BUILT	1984
VOPAK ASSET No.		VESSEL JACKET / COIL			
VOPAK INSP. STAMP		MAX. DESIGN (PSIG & °F)	ATMOS. AMB.	PRESS. TEMP.	PRESS. TEMP.
		MATLS. OF CONST.	ATLAC 400, DERAKANE 470, 20 MIL NEXUS		
ORIG. NOM. THK.	MIN. ALLOW. THK.	TOTAL CAPACITY	1175 GAL.		
SHELL		SPECIAL NOTES			
TOP HEAD		INS. CO.			
BTM. HEAD					

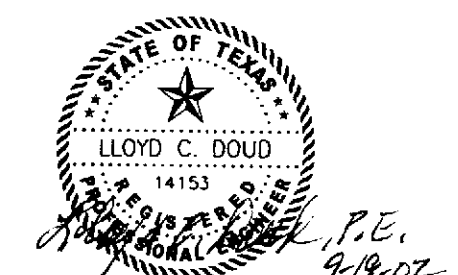
NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	DRAWING NUMBER	REFERENCE DRAWINGS
0	FIELD VERIFIED AND REDRAWN ON CAD	8/02	J.A.M.					01-10-0001	DISPOSAL PLOT PLAN
								C-6255-1	TANKINETICS INC. - EMPAK EFFLUENT TANK
								05-10-0016	DISPOSAL SITE PLAN - COATINGS

<b>Vopak INDUSTRIAL SERVICES</b>		2759 Battleground Road Deer Park, Texas 77536 (281) 604-6150	
ENGINEER	H & M DESIGN, INC. 6602 SPENCER HWY. LA PORTE, TEXAS 77571	PH # (281) 930-8750 FAX # (281) 930-8711 E-MAIL: hnm@hmdesigninc.com	
DRAWN BY:	P.P.	DATE	08/02
CHECKED BY:	PAM SMOLEN	PROJ. ENG.:	
H&M JOB #:	1180-VI	VOPAK ENG.:	N.T.S.
		ENGINEER JOB NO.:	

<b>AS BUILT</b>	
<b>05-C-2 - PLAN AND ELEVATION</b>	
<b>CLARIFIER EFFLUENT</b>	
<b>NOR #60</b>	
Sht. size:	D
ACed File Name:	05-60-C-2-1-REV0.DWG
Drawing Number:	05-60-C-2-1
Rev.	0



**NOTE:**  
THIS DRAWING REDRAWN FROM EXISTING TANKINETICS, INC. DRAWING NO. C-6255-2. MATERIALS OF CONSTRUCTION & DESIGN CONDITIONS SHOWN ABOVE ARE REFERENCED FROM THIS DRAWING AND NAMEPLATE ON TANK.



This Seal dated 9-19-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

<b>VESSEL</b>		VOPAK DEER PARK, TX		NATIONAL BOARD No.	
EQUIP. MFR.	TANKINETICS	MFR. SN.			
VOPAK EQUIP. No.	9-0164	TANK SERVICE	YEAR BUILT	MAR. 1984	
VOPAK ASSET No.		VESSEL	JACKET / COR.		
VOPAK INSP. STAMP		MAX. DESIGN (PSIG & °F)	PRESS. TEMP.	PRESS. TEMP.	
		ATM.	AMB.		
		MATLS. OF CONST.	2 PLY. NEXUS, DERAKANE 470, ATLAC 400		
		WT. EMPTY:	700 LBS	WIND:	110
		SP. GR.:	1.5	SEISMIC:	0
		SPECIAL NOTES	CAPACITY: 2277 GALS		
SHELL		INS. CO.			
TOP HEAD					
BTM. HEAD					

MATERIALS OF CONSTRUCTION		
	VESSEL OR SHELL SIDE	JACKET OR TUBE SIDE
SHELL	DERAKANE 470	
HEADS		
FLANGES		
NOZZLE NECKS		
VESSEL SUPPORTS		
EXTERNAL BOLTS		
EXTERNAL NUTS		
EXTERNAL BOLTS		
EXTERNAL NUTS		
GASKETS		

DESIGN CONDITIONS	
DESIGN PRESS.	ATMOS
DESIGN TEMP.	AMB
OPERATING PRESS.	
OPERATING TEMP.	
CORR. ALLOWED	
CODE	NBS PS 15-89
CODE STAMP	
STRESS STAMP	
STRESS RELIEF	
RADIOGRAPH	
JOINT EFF.	
HYDRO TEST	1.5
SP. GR. CONTENTS	

CAPACITIES AND WEIGHTS		
OPERATING CAP.	2277 GAL	CU. FT.
FULL CAPACITY		CU. FT.
EMPTY WEIGHT	700 LBS	LBS
OPERATING WEIGHT		LBS

NOZZLE SCHEDULE									
MARK	NO.	SIZE	RATING	FACING	T	O.S. PROJ.	NOTE	INSTRUMENT	SERVICE
S1	1	1"	3000	NPT			EXIST	OUTLET	
S2	1	6"					EXIST	INLET	
S3	1	3"					EXIST	INLET	

GENERAL NOTES	
1. FRP TANK IN ACCORDANCE WITH SPEC NBS PS 15-89.	
2. INNER CORROSION BARRIER: DERAKANE 470, REINFORCED WITH 2 PLY NEXUS SURFACE VEIL.	
3. 200 MIL. BACKUP.	
4. BALANCE OF LAMINATE FABRICATED TO FULL WALL THICKNESS WITH ATLAC 400.	
5. EXTERIOR SURFACE FINISHED WITH WHITE PROTECTIVE COATING P/A 1748-A.	
6. NOZZLE BOLT HOLES TO STRADDLE PRINCIPLE TANK CENTER LINES (0-180°, 90-270°) AXES AT PLAN VIEW.	
7. FLANGED NOZZLES ARE 25 PSI RATED WITH 150# DRILLING.	
8. NOZZLE PROJECTIONS ARE FROM INSIDE TANK WALL.	
9. LEAK DETECTION VIA GRATING ON FOUNDATION.	

VOPAK REFERENCE DATA			
PURCH. ORDER No.		PURCH. ORDER DATE	1984
ITEM NUMBER		ASSET NUMBER	

MANUFACTURER DATA	
MFR. NAME:	
STREET / P.O. BOX:	
CITY:	STATE: ZIP:
TELEPHONE No.:	FAX No.:
ENGINEERING CONTACT:	
MFR. SERIAL No.:	SHOP ORDER No.:
MFR. DWG. No.:	REV.:

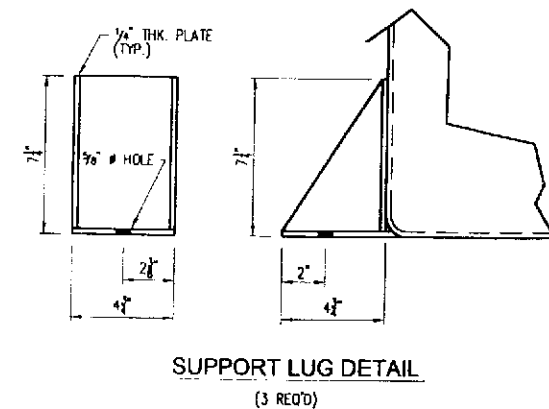
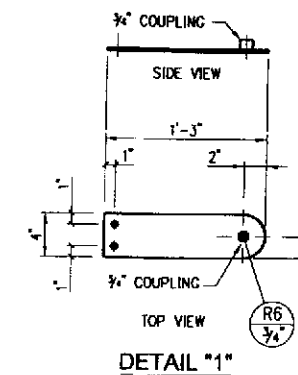
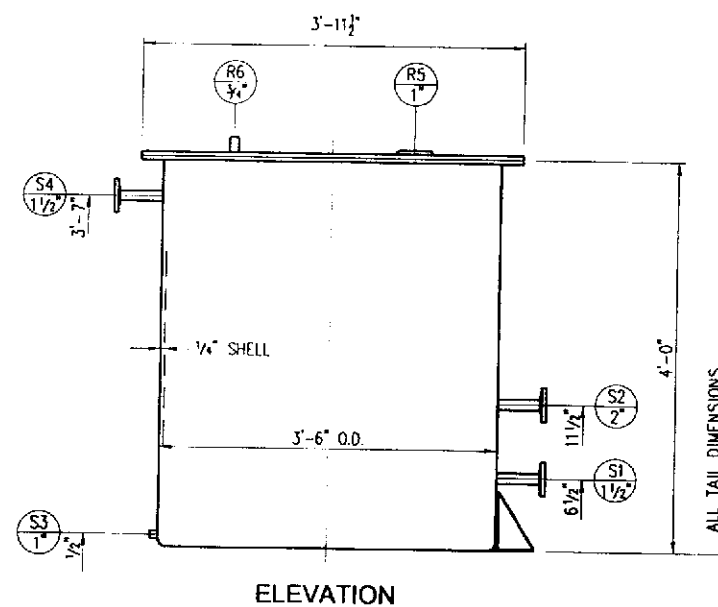
NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	DRAWING NUMBER	REFERENCE DRAWINGS
0	FIELD VERIFIED AND DRAWN ON CAD	08/02	JAM					01-10-0001 DISPOSAL PLOT PLAN	
								05-10-0016 DISPOSAL SITE PLAN - COATINGS	
								C-6255-2 TANKINETICS- EMPAK INC. - SLUDGE TANK	

<b>Vopak</b> INDUSTRIAL SERVICES		2759 Battleground Road Deer Park, Texas 77536 (281) 604-6150	
ENGINEER	H & M DESIGN, INC. 8602 SPENCER HWY. LA PORTE, TEXAS 77571	PH # (281) 930-8750	
DRAWN BY:	JAM	DATE	08/02
CHECKED BY:	PAM SMOLEN	SCALE:	N.T.S.
H&M JOB #:	1180-VI	ENGINEER JOB NO.:	-PD

AS BUILTS	
05-C-3 - PLAN AND ELEVATION	
CLARIFIER SLUDGE	
NOR #61	
Shl. size:	D
ACad File Name:	05-60-C-3-1-REV0.DWG
Drawing Number:	05-60-C-3-1
Rev.	0



NOZZLE SCHEDULE									
MARK	NO.	SIZE	RATING	FACING	"T"	O.S. PROJ.	NOTE	SERVICE	
S1	1	1/2"	150	RF	-	-	EXIST	SPARE	
S2	1	2"	150	RF	-	-	EXIST	OUTLET	
S3	1	1"	3000	FRD	-	-	EXIST	DRUM	
S4	1	1/2"	150	RF	-	-	EXIST	OVERFLOW	
R5	1	1"	150	RF	-	-	EXIST	VENT	
R6	1	1/4"	3000	FRD	-	-	EXIST	HI LEVEL	



[illegible]

## 1. LEAK DETECTION VIA GRATING ON FOUNDATION.

MANUFACTURER DATA			
MFR. NAME: _____			
STREET / P.O. BOX: _____			
CITY: _____		STATE: _____	ZIP: _____
TELEPHONE No.: ( ) _____		FAX No.: ( ) _____	
ENGINEERING CONTACT: _____			
MFR. SERIAL No. _____		SHOP ORDER No.: _____	
MFR. DWG. No. _____		REV.: _____	

CEA-02-023

[illegible]

 <b>Vopak</b> <b>INDUSTRIAL SERVICES</b>		2759 Battleground Road Deer Park, Texas 77536 (281) 604-6150	
ENGINEER		H & M DESIGN, INC. 8602 SPENCER HWY. LA PORTE, TEXAS 77571	PH # (281) 930-8750 FAX # (281) 930-8711 E-MAIL hnm@hmdesigninc.com
DRAWN BY: JS	DATE 08/02		PROJ. ENG.:
CHECKED BY:			VOPAK ENG.: PAM SMOLEN
H&M JOB #: 1160-VI			SCALE: N.T. ENGINEER JOB NO.

This Seal dated 9-19-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

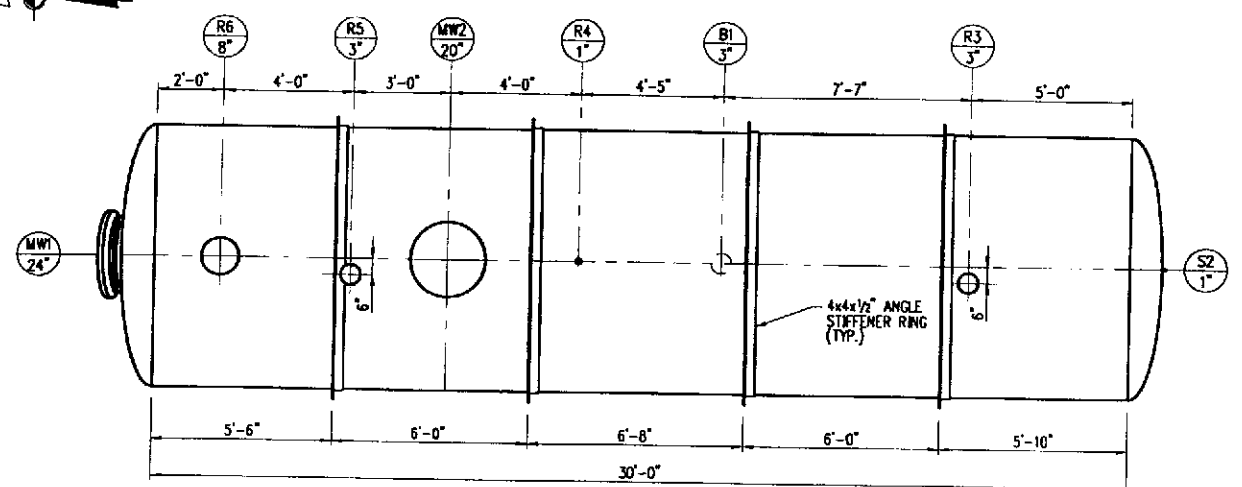
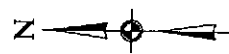
AS BUILTS

05-C-4 - PLAN AND ELEVATION

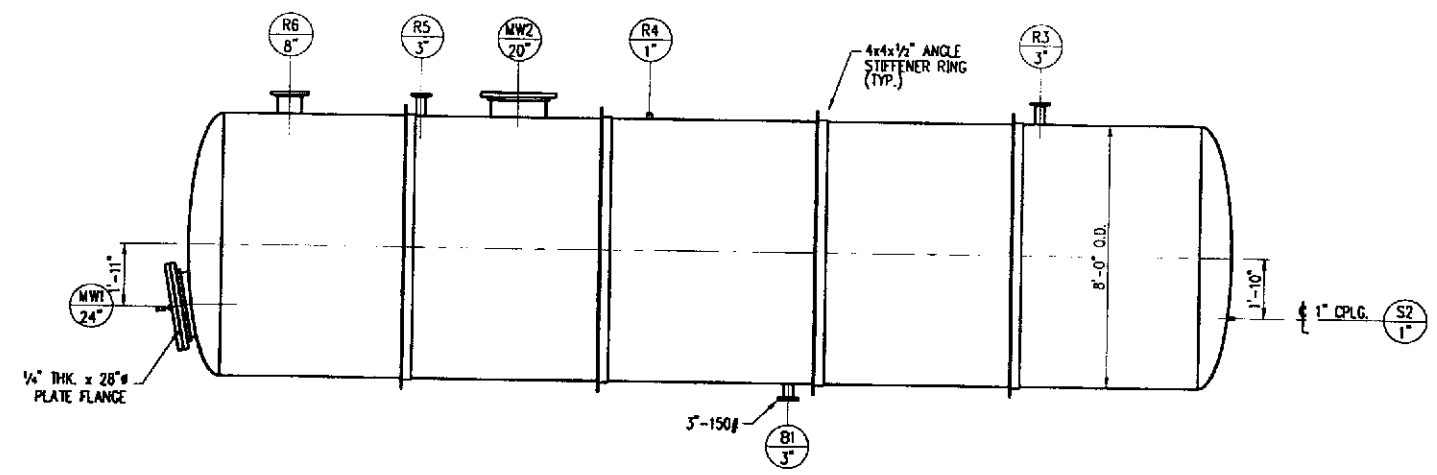
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NOR #62

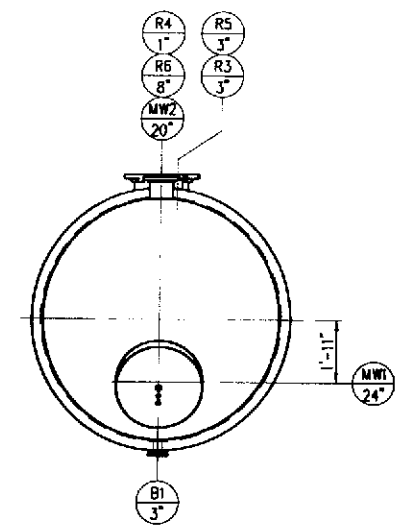
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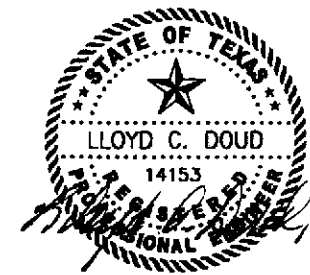
PLAN



ELEVATION  
LOOKING EAST



END VIEW  
LOOKING SOUTH



This Seal dated 8-19-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

MATERIALS OF CONSTRUCTION	
SHELL	CS
HEADS	CS
FLANGES	CS
NOZZLE NECKS	CS
VESSEL SUPPORTS	
INTERNAL BOLTS	
NUTS	
EXTERNAL BOLTS	
NUTS	
GASKETS	

DESIGN CONDITIONS	
DESIGN PRESS.	
DESIGN TEMP.	
OPERATING PRESS.	17.5 psig
OPERATING TEMP.	AM
CODE ALLOWED	
CODE	
CODE STAMP	
STRESS STAMP	
STRESS RELIEF	
RADIOGRAPH	
CONTR. EFF.	
HYDRO TEST	
SP. GR. CONTENTS	

CAPACITIES AND WEIGHTS	
OPERATING CAP.	11,700 GAL.
FULL CAPACITY	CAL.
EMPTY WEIGHT	CS.
OPERATING WEIGHT	CS.

NOZZLE SCHEDULE									
MARK	No.	SIZE	RATING	FACING	T	O.S. PROJ.	TYPE	SERVICE	
B1	1	3"	150#	RF	5'	EXIST.	SUBST.	SECTION #	
S2	1	1"	300#	RF	N/A	EXIST.	DRAN		
R3	1	3"	150#	RF	5'	EXIST.	VAPOR CONTROL #1 / VENT		
R4	1	1"	300#	RF	N/A	EXIST.	W. LEVEL		
R5	1	3"	150#	RF	5'	EXIST.	TRADING LINE #1		
R6	1	8"	150#	RF	5'	EXIST.	SPARE W/IN		
MW1	1	24"				EXIST.	MANWAY w/ 1/2" CPLG.		
MW2	1	20"				EXIST.	MANWAY		

GENERAL NOTES  
1. SURFACE PREPARATION: NEAR WHITE METAL BLAST SSPC-SP-10-1988.  
2. PAINTING: SHELL & HEADS - ZINC/EPoxy/POLYURETHANE  
3. LIST OF APPLICABLE VOPAK STANDARDS AND SPECS.  
SPECIFICATION NO'S 08100, 08200

VOPAK REFERENCE DATA			
PURCH. ORDER No.	ASSET NUMBER	PURCH. ORDER DATE: 1996	ITEM NUMBER

MANUFACTURER DATA			
MFR. NAME:	STREET / P.O. BOX:	CITY:	STATE:
TELEPHONE No.:	FAX No.:		
ENGINEERING CONTACT:			
MFR. SERIAL No.:	SHOP ORDER No.:		
MFR. DWG. No.:	REV.:		

CEA-00-N/A

NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	DRAWING NUMBER	REFERENCE DRAWINGS
0	FIELD VERIFIED AND DRAWN IN CAD	08/02	J.A.M.					01-10-0001	DISPOSAL PLOT PLAN
								05-10-0016	DISPOSAL SITE PLAN - COATINGS
								05-50-0002	TANKS T-51 THRU T-55 DIKE WALL EXTENSION

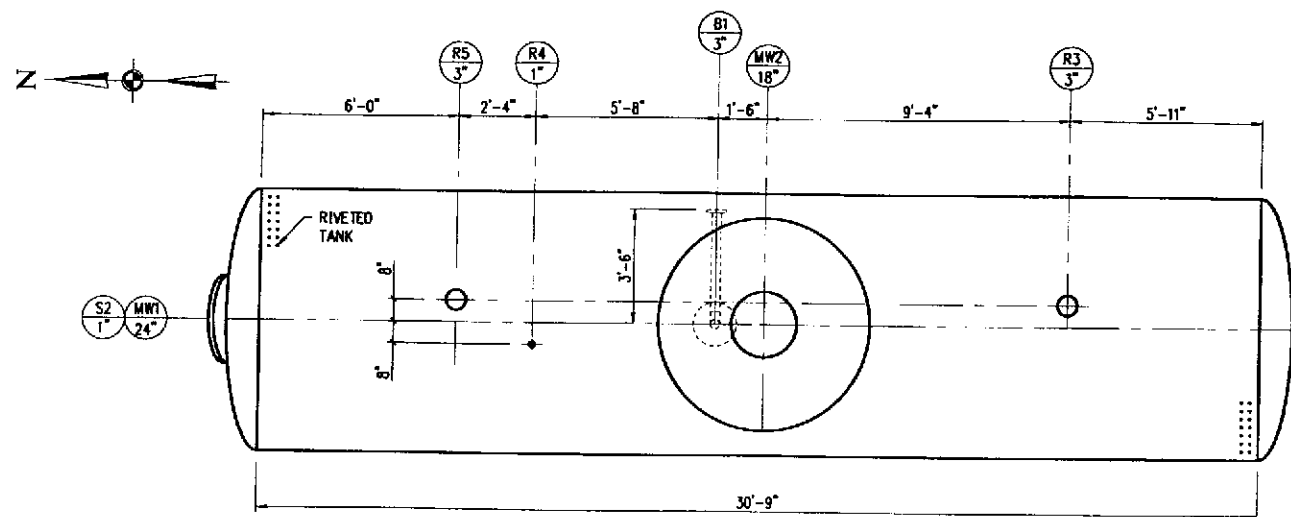
2759 Battleground Road  
Deer Park, Texas 77536  
(281) 804-8150

ENGINEER: H & M DESIGN, INC.  
8602 SPENCER HWY.  
LA PORTE, TEXAS 77571  
PH # (281) 930-8750  
FAX # (281) 930-8711  
E-MAIL: hmdesign@hmdesign.com

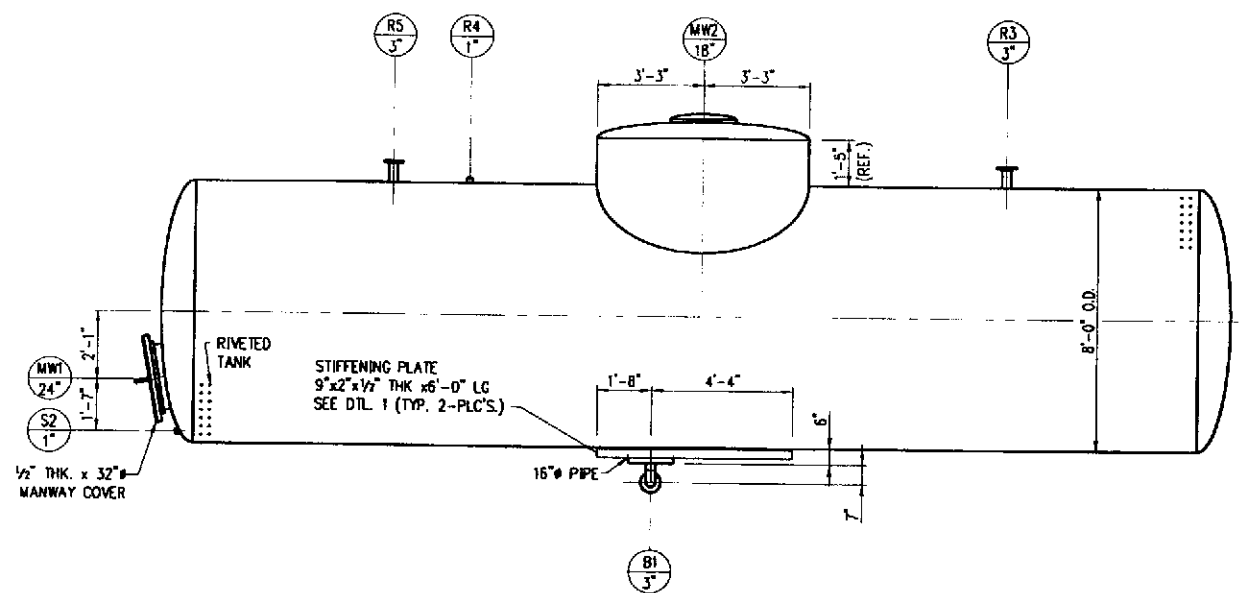
DRAWN BY: JAM  
CHECKED BY: PAM SMOLEN  
H&M JOB #: 1180-VI

DATE: 08/02  
SCALE: N.T.S.  
ENGINEER JOB NO.: -PD

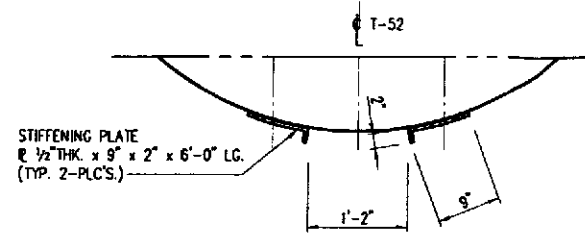
AS BUILTS	
05-T-51 - PLAN, ELEVATION AND END VIEW	
STORAGE	
NOR#63	
Shl. size: D	ACad File Name: 05-60-T-51-1-REV0.DWG
Drawing Number: 05-60-T-51-1	Rev. 0



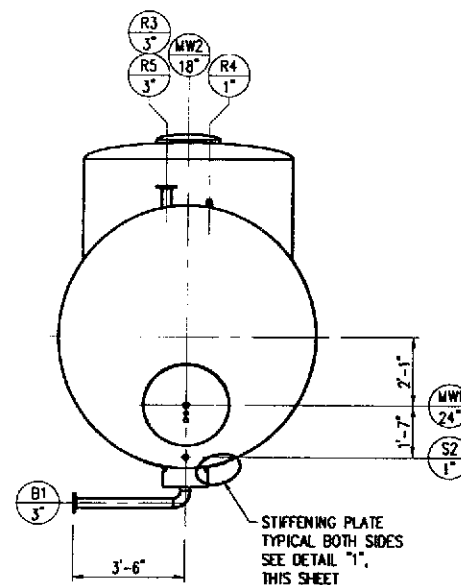
PLAN



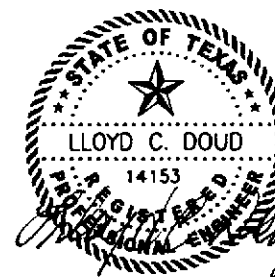
ELEVATION  
LOOKING EAST



DETAIL "1"  
STIFFENING PLATE



END VIEW  
LOOKING SOUTH



This Seal dated 9-19-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

# MATERIALS OF CONSTRUCTION

SHELL	CS
HEADS	CS
FLANGES	CS
NOZZLE NECKS	CS
VESSEL SUPPORTS	
INTERNAL BOLTS	
EXTERNAL BOLTS	
INTERNAL NUTS	
EXTERNAL NUTS	
GASKETS	

## DESIGN CONDITIONS

DESIGN PRESS.	
DESIGN TEMP.	172 deg F
OPERATING PRESS.	
OPERATING TEMP.	
CORR. ALLOWED	
CODE	
CODE STAMP	
STRESS STAMP	
STRESS RELIEF	
RADIOGRAPH	
JOINT EFF.	
HYDRO TEST	
SP. GR. CONTENTS	

## CAPACITIES AND WEIGHTS

OPERATING CAP.	12,000 GAL.	CU. FT.
FULL CAPACITY		CU. FT.
EMPTY WEIGHT	LBS.	LBS.
OPERATING WEIGHT	LBS.	LBS.

## NOZZLE SCHEDULE

MARK	No.	SIZE	RATING	FACING	T"	O.S.	PROJ.	TYPE	SERVICE
B1	1	3"							EXIST. SUCTON #2
S2	1	1"	3000	THRD		N/A			EXIST. DRAIN
R3	1	3"							EXIST. VAPOR CONTROL #2 / VENT
R4	1	1"	3000	THRD		N/A			EXIST. HI LEVEL
R5	1	3"							EXIST. LOADING LINE HT #2
MW1	1	24"							EXIST. MANWAY W/CLG.
MW2	1	18"							EXIST. MANWAY

## GENERAL NOTES

1. SURFACE PREPARATION : NEAR WHITE METAL BLAST SSPC-SP-10-1985.
2. PAINTING: SHELL & HEADS - ZINC/EPXY/POLYURETHANE
3. LIST OF APPLICABLE VOPAK STANDARDS AND SPECS. SPECIFICATION NO'S. 05100, 05210

## VOPAK REFERENCE DATA

PURCH. ORDER No.	ASSET NUMBER	PURCH. ORDER DATE: 1990	ITEM NUMBER	ASSET NUMBER
------------------	--------------	-------------------------	-------------	--------------

## MANUFACTURER DATA

MFR. NAME:	
STREET / P.O. BOX:	
CITY:	STATE: ZIP:
TELEPHONE No.:	FAX No.:
ENGINEERING CONTACT:	
MFR. SERIAL No.:	SHOP ORDER No.:
MFR. DWG. No.:	REV.:

CEA-00-N/A

## AS BUILTS

05-T-52 - PLAN, ELEVATION AND END VIEW

## STORAGE

NOR#64

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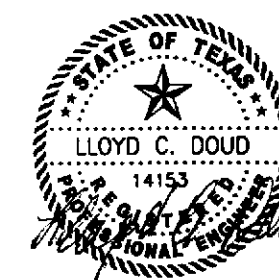
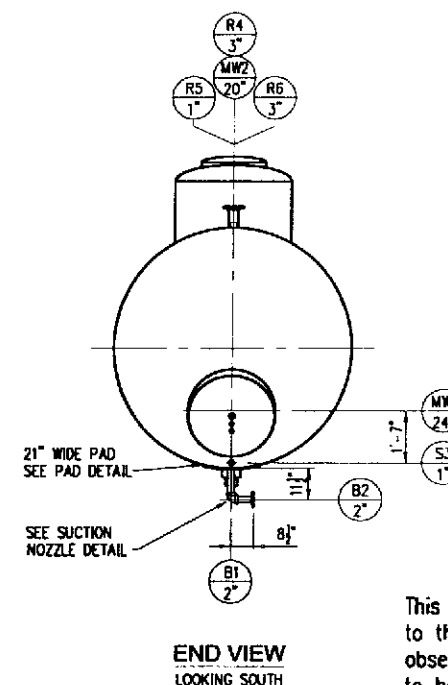
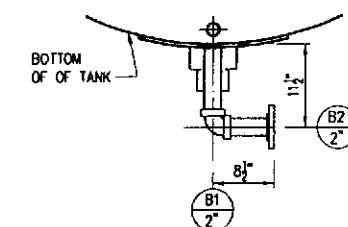
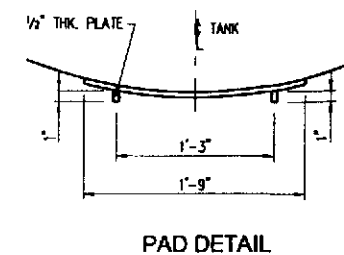
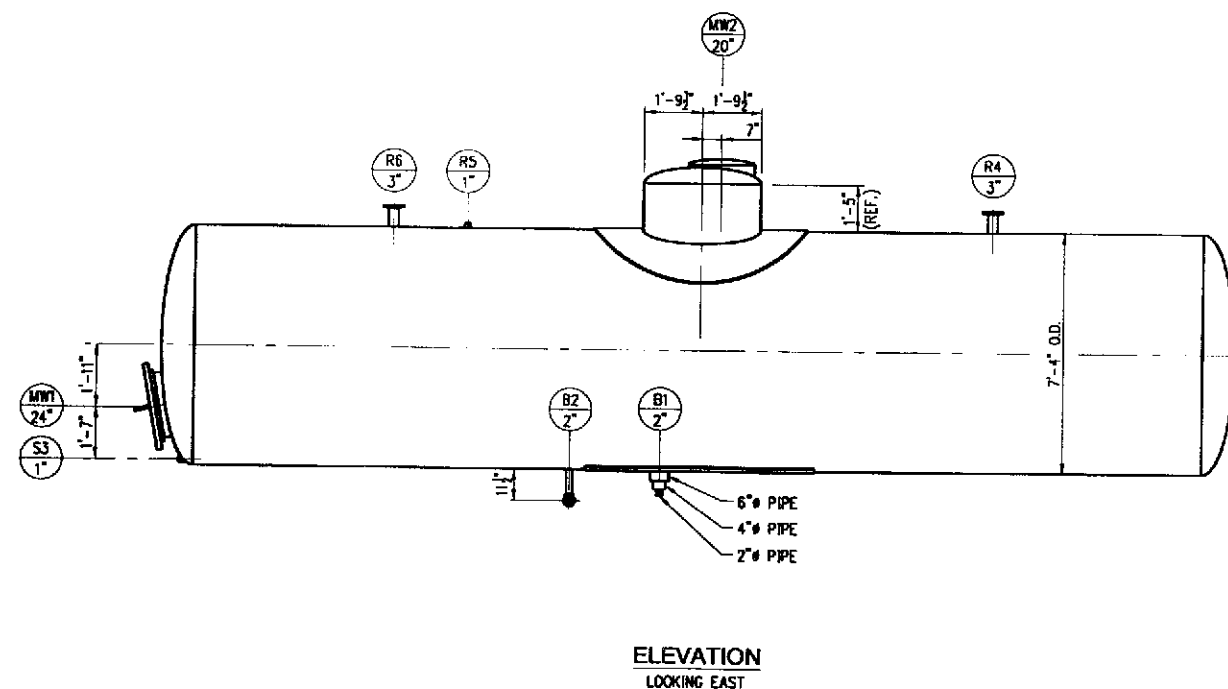
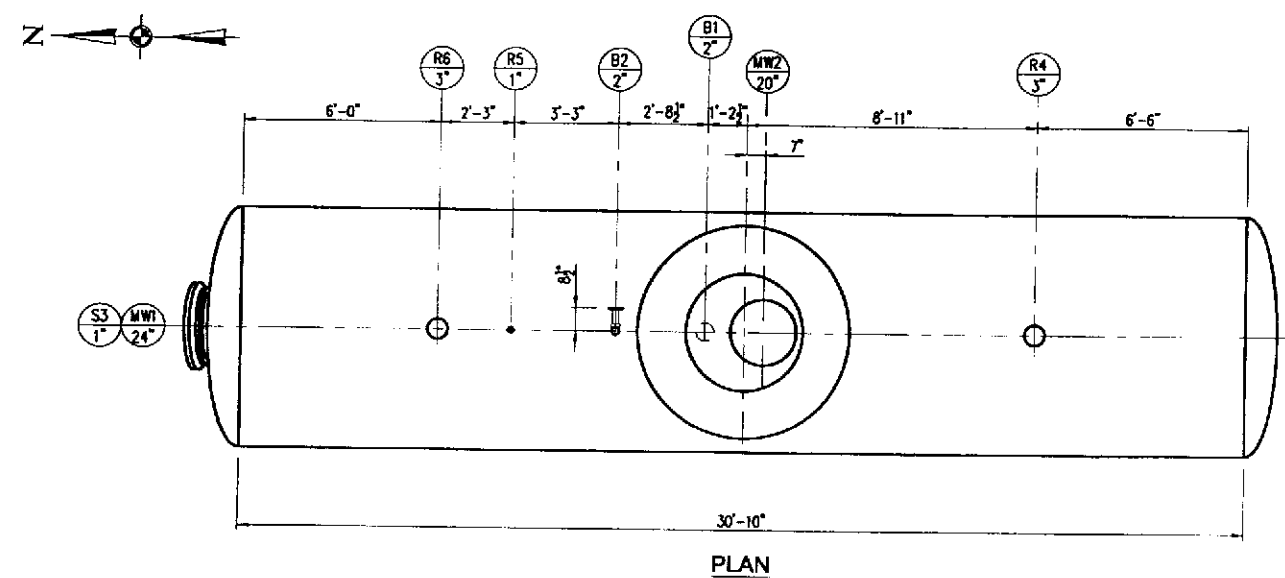
NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	DRAWING NUMBER	REFERENCE DRAWINGS
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								05-10-0016	DISPOSAL SITE PLAN - COATINGS
								05-30-0002	TANKS T-51 THRU T-55 DIKE WALL EXTENSION



2759 Battleground Road  
Deer Park, Texas 77536  
(281) 604-8150

ENGINEER H&M DESIGN, INC.  
8602 SPENCER HWY.  
LA PORTE, TEXAS 77571  
PH # (281) 930-8750  
FAX # (281) 930-8711  
E-MAIL hnm@hndesigninc.com

DRAWN BY:	DATE	PROJ. ENG.:
JAM	08/02	
CHECKED BY:		VOPAK ENG.:
		PAM SMOLEN
H&M JOB #:		ENGINEER JOB NO.
1160-VI		



This Seal dated 9-19-07 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

MATERIALS OF CONSTRUCTION	
SHELL	CS
HEADS	CS
FLANGES	CS
NOZZLE NECKS	CS
VESSEL SUPPORTS	-
INTERNAL BOLTS NUTS	-
EXTERNAL BOLTS NUTS	-
GASKETS	-

DESIGN CONDITIONS	
DESIGN PRESS	
DESIGN TEMP	
OPERATING PRESS	1/2 in/H <sup>2</sup>
OPERATING TEMP	AWS
CORR ALLOWED	
CODE	
WELD STAMP	
STRESS STAMP	
STRESS RELIEF	
RADIOGRAPH	
JOINT EFF	
HYDRO TEST	
SP. REQ. COMMENTS	

CAPACITIES AND WEIGHTS			
OPERATING CAP	10,100	GAL	CU YD
FULL CAPACITY		GAL	CU YD
EMPTY WEIGHT		LBS	LBS
OPERATING WEIGHT		LBS	LBS

NOZZLE SCHEDULE									
MARK	No.	SIZE	RATING	FACING	T"	O.S. PROJ.	TYPE	SERVICE	
B1	1	2"	3000	THRD			EXIST.	SPARE	
B2	1	2"	150	RF			SEE REV.	EXIST.	SUCTION #3
S3	1	1"	3000	THRD		N/A	EXIST.	BRAIN	
R4	1	3"	150				EXIST.	VAPOR CONTROL #3 / MEAT	
R5	1	1"	3000	THRD		N/A	EXIST.	LEAF	
R6	1	3"	150	RF		R	EXIST.	LOADING LINE HT #3	
MW1	1	2 1/2"					EXIST.	MANWAY W/ OPLG	
MW2	1	20"					EXIST.	MANWAY	

### GENERAL NOTES



1. SURFACE PREPARATION : NEAR WHITE METAL BLAST SSPC-SP-10-1988.
2. PAINTING: SHELL & HEADS - ZINC/EPOXY/POLYURETHANE
3. LIST OF APPLICABLE VOPAK STANDARDS AND SPECS.  
SPECIFICATION NO's: 08100, 08210

VOPAK REFERENCE DATA			
PURCH. ORDER No.		PURCH. ORDER DATE: 1980	
ITEM NUMBER	ASSET NUMBER	ITEM NUMBER	ASSET NUMBER

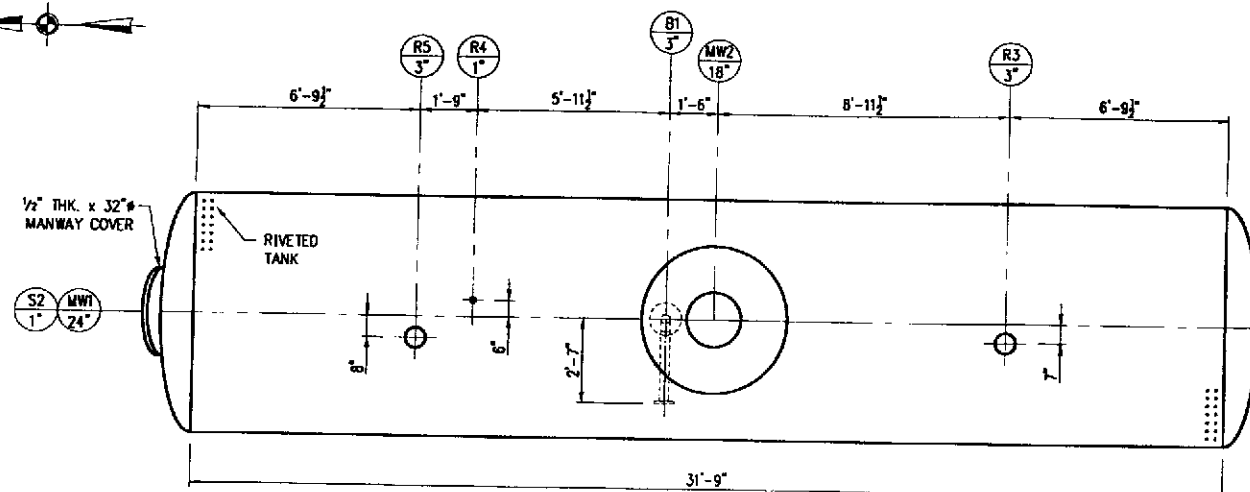
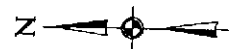
**MANUFACTURER DATA**

MFR. NAME: \_\_\_\_\_  
STREET / P.O. BOX: \_\_\_\_\_  
CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_  
TELEPHONE No.: ( ) \_\_\_\_\_ FAX No.: ( ) \_\_\_\_\_  
ENGINEERING CONTACT: \_\_\_\_\_  
MFR. SERIAL No.: \_\_\_\_\_ SHOP ORDER No.: \_\_\_\_\_  
MFR. DWG. No.: \_\_\_\_\_ REV.: \_\_\_\_\_

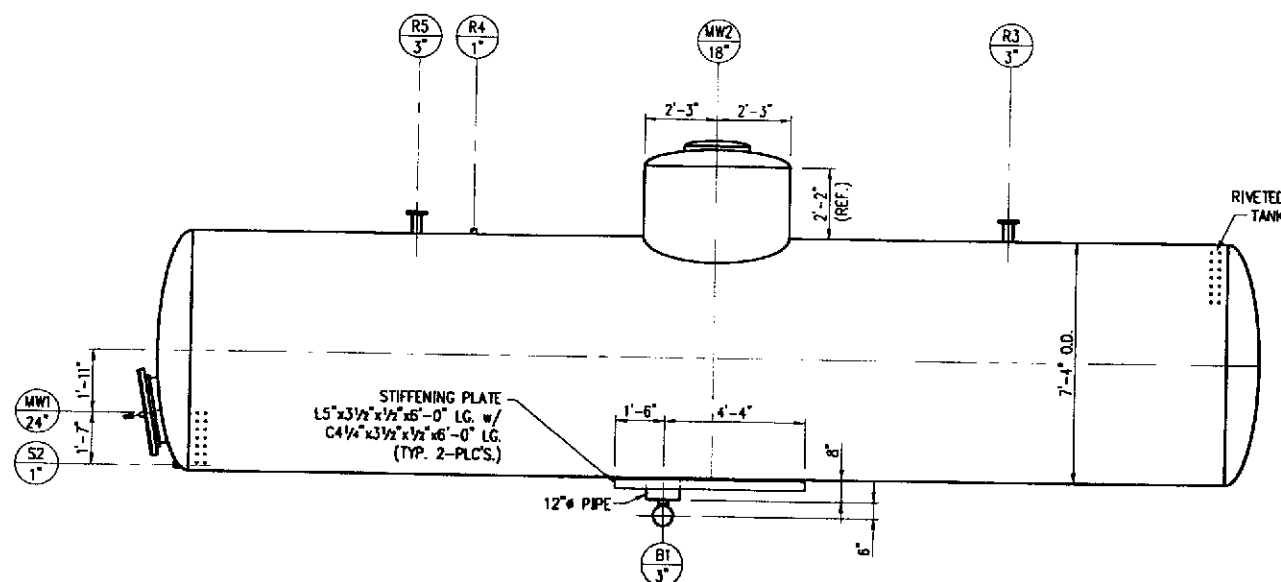
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 <b>Vopak</b> <b>INDUSTRIAL SERVICES</b>		2759 Bottleground Road Deer Park, Texas 77536 (281) 604-8150	
ENGINEER	 H & M DESIGN, INC. 8602 SPENDER HWY. LA PORTE, TEXAS 77571	PH # (281) 930-8750 FAX # (281) 930-8711 E-MAIL hnm@hmdesigninc.com	
DRAWN BY: JAM	DATE 08/02		PROJ. ENG.:
CHECKED BY:			VOPAK ENG.: PAM SMOLLEN
H&M JOB #:			SCALE: N.T. ENGINEER JOB NO.

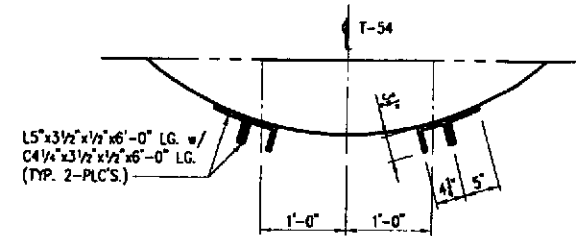
AS BUILTS			
05-T-53 - PLAN, ELEVATION AND END VIEW			
STORAGE			
NOR#65			
Shr. size: D	ACad File Name: 05-60-T-53-1-REV0.DWG	Drawing Number: 05-60-T-53-1	Rev. 0



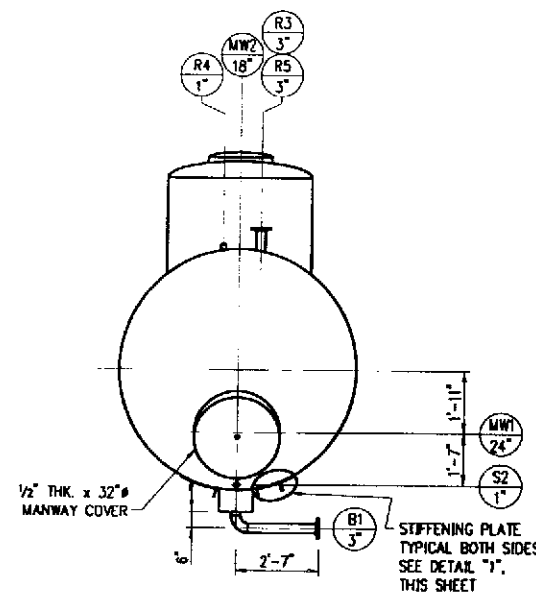
PLAN



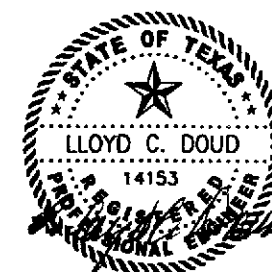
ELEVATION  
LOOKING EAST



DETAIL "1"  
STIFFENING PLATE



END VIEW  
LOOKING SOUTH



This Seal dated 9-18-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

#### MATERIALS OF CONSTRUCTION

SHELL	CS
HEADS	CS
FLANGES	CS
NOZZLE NECKS	CS
VESSEL SUPPORTS	
INTERNAL BOLTS	
EXTERNAL BOLTS	
NUTS	
GASKETS	

#### DESIGN CONDITIONS

DESIGN PRESS.	
DESIGN TEMP.	
OPERATING PRESS.	1/2 W.G.
OPERATING TEMP.	AMB
CODE ALLOWED	
CODE	
CODE BYAMP	
STRESS STAMP	
STRESS RELIEF	
RADIOGRAPH	
JOINT EFF.	
HYDRO TEST	
SP. GR. CONTENTS	

#### CAPACITIES AND WEIGHTS

OPERATING CAP.	10,400 GAL	CU. FT.
FULL CAPACITY		CU. FT.
EMPTY WEIGHT	LBS.	LBS.
OPERATING WEIGHT	LBS.	LBS.

#### NOZZLE SCHEDULE

MARK	No.	SIZE	RATING	FACING	T"	O.S.	PROJ.	TYPE	SERVICE
B1	1	3"	150	RF		SEE BREV.	EXIST.		SUCKER #1
S2	1	1"	300	RF		N/A	EXIST.		DRAIN
R3	1	3"	150	RF		N/A	EXIST.		VAPOR CONTROL #1 / VENT
R4	1	1"	300	RF		N/A	EXIST.		HI LEG
R5	1	3"	150	RF		N/A	EXIST.		LOADING LINE 1114
MW1	1	24"					EXIST.		MANWAY w/ 1/4 O.D.C.
MW2	1	18"					EXIST.		MANWAY

#### GENERAL NOTES

1. SURFACE PREPARATION : NEAR WHITE METAL BLAST SSPC-SP-10-1988.
2. PAINTING: SHELL & HEADS - ZINC/EPOXY/POLYURETHANE
3. LIST OF APPLICABLE VOPAK STANDARDS AND SPECS. SPECIFICATION NO'S. 00100, 00210

#### VOPAK REFERENCE DATA

PURCH. ORDER No.	PURCH. ORDER DATE	1988
ITEM NUMBER	ASSET NUMBER	ITEM NUMBER ASSET NUMBER

#### MANUFACTURER DATA

MFR. NAME:	
STREET / P.O. BOX:	
CITY:	STATE: ZIP:
TELEPHONE No.:	FAX No.:
ENGINEERING CONTACT:	
MFR. SERIAL No.:	SHOP ORDER No.:
MFR. DWG. No.:	REV.:

CEA-00-N/A

#### AS BUILTS

05-T-54 - PLAN, ELEVATION AND END VIEW

#### STORAGE

NOR#66

Shr. size:	ACad File Name:	Drawing Number:	Rev.
D	05-60-T-54-1-REV0.DWG	05-60-T-54-1	0

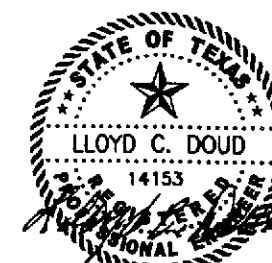
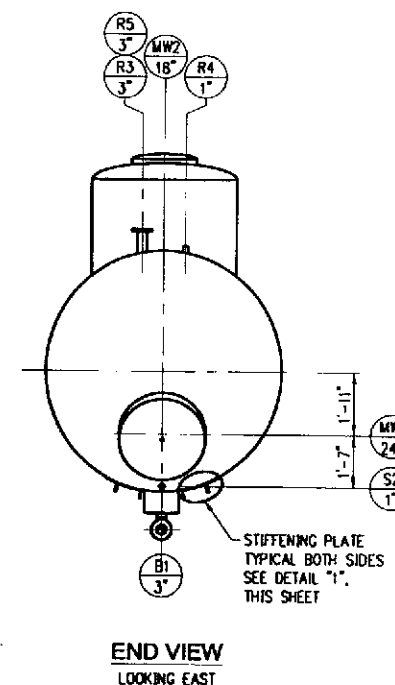
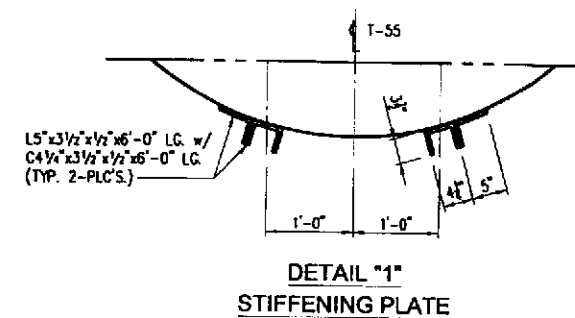
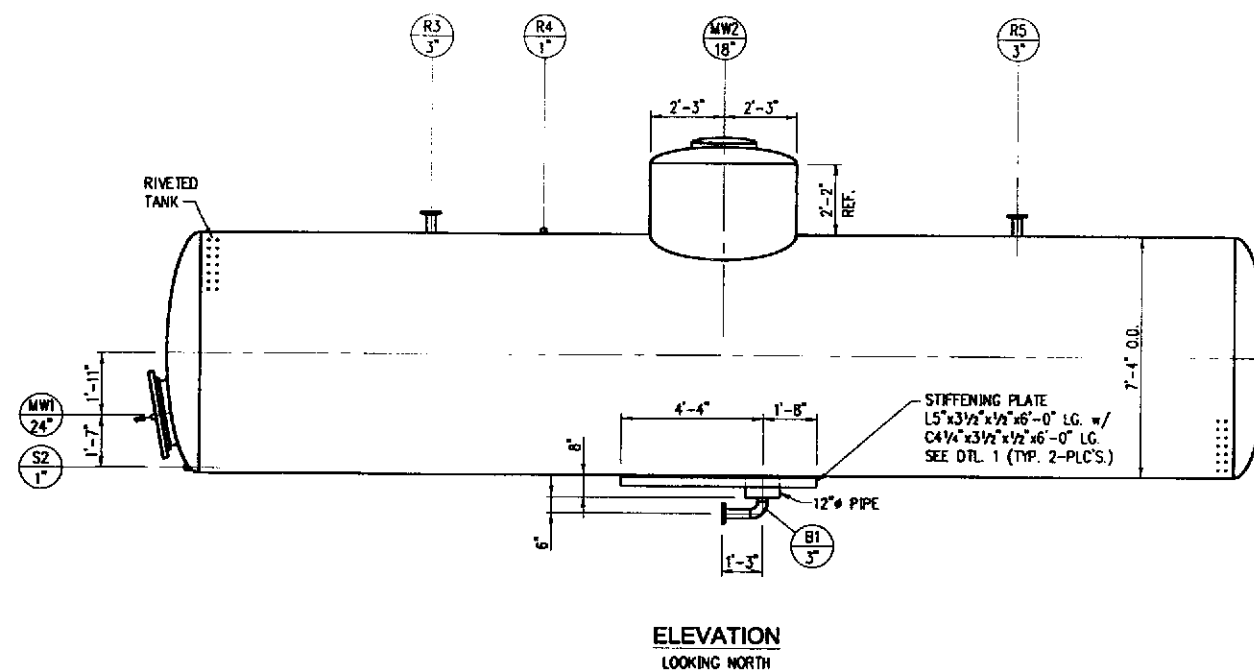
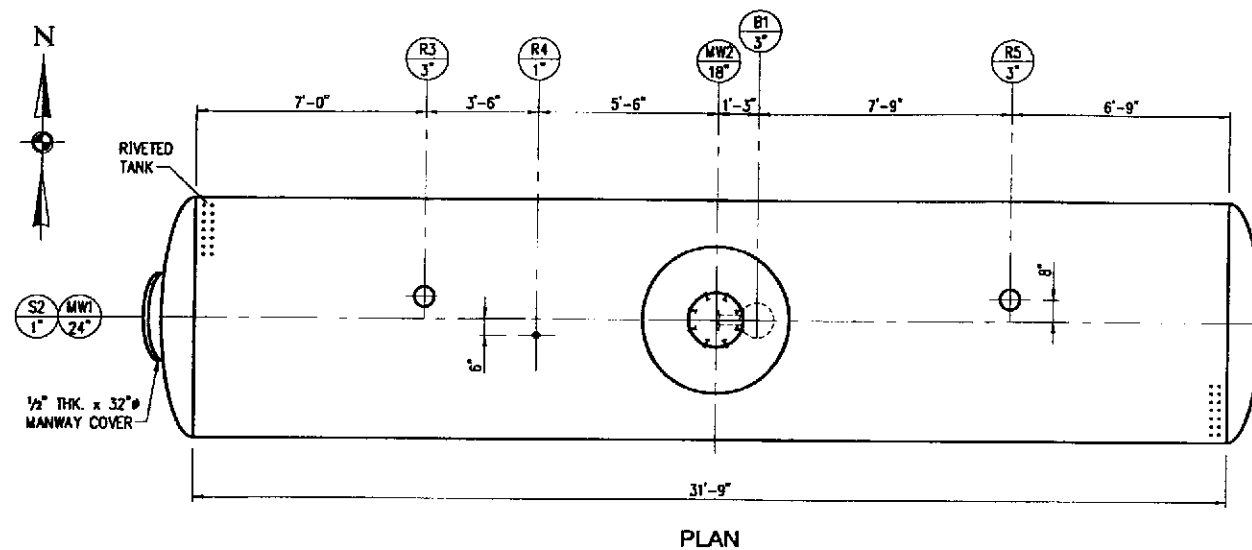
NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	DRAWING NUMBER	REFERENCE DRAWINGS
0	FIELD VERIFIED AND DRAWN IN CAD	08/02	J.A.M.					01-10-0001	DISPOSAL PLOT PLAN
								05-10-0016	DISPOSAL SITE PLAN - COATINGS
								05-50-0002	TANKS T-51 THRU T-55 DIKE WALL EXTENSION

**Vopak**  
INDUSTRIAL SERVICES

2759 Battleground Road  
Dear Park, Texas 77536  
(281) 604-6150

ENGINEER **H&M** DESIGN, INC.  
H & M DESIGN, INC.  
8602 SPENCER HWY.  
LA PORTE, TEXAS 77571  
PH # (281) 930-8750  
FAX # (281) 930-8711  
E-MAIL: hnd@hmdesigninc.com

DRAWN BY: JAM DATE: 08/02  
CHECKED BY: PAM SMOLEN  
H&M JOB #: 1180-VI  
PROJ. ENG.:  
VOPAK ENG.: SCALE: N.T.S.  
ENGINEER JOB NO.: -PD



This Seal dated 9-18-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (LLoyd C. Doud, P.E. #14153).

MATERIALS OF CONSTRUCTION	
SHELL	CS
HEADS	CS
FLANGES	CS
NOZZLE NECKS	CS
VESSEL SUPPORTS	.
INTERNAL BOLTS	.
INTERNAL NUTS	.
EXTERNAL BOLTS	.
EXTERNAL NUTS	.
GASKETS	.

DESIGN CONDITIONS	
DESIGN PRESS.	
DESIGN TEMP.	
OPERATING PRESS.	17.02/tn
OPERATING TEMP.	AMB
CORR. ALLOWED	
CODE	
COSE STAMP	
STRESS STAMP	
STRESS RELIEF	
RADIOGRAPH	
JOINT EFF.	
HYDRO TEST	
SP. GR. CONTENTS	

CAPACITIES AND WEIGHTS		
OPERATING CAP.	10,400	CU. FT.
FULL CAPACITY		CU. FT.
EMPTY WEIGHT		LBS.
OPERATING WEIGHT		LBS.



NOZZLE SCHEDULE									
MARK	NO.	SIZE	RATING	FACING	"T"	O.S. PROJ.	TYPE	SERVICE	
B1	1	3"	150	RF		S.S. DYE	CAST	SECTION A5	
B2	1	1"	3000	THRD		N/A	CAST	SECTION A5	
R3	1	3"	150	RF		N/A	EXIST.	VAPOR CONTROL A5 / NOT	
R4	1	1"	3000	THRD		N/A	EXIST.	IN LEVEL	
S1	1	3"	150	RF		N/A	EXIST.	LOW LOU HT 15	
MW1	1	3"	150	RF		N/A	EXIST.	WARRANTY = 7' D/C	
MW2	1	3"	150	RF		N/A	EXIST.	WARRANTY = 7' D/C	

GENERAL NOTES	
1.	SURFACE PREPARATION : NEAR WHITE METAL BLAST SSPC-SP-10-1989.
2.	PAINTING: SHELL & HEADS - ZINC/EPICRY/POLYURETHANE
3.	LIST OF APPLICABLE YOPAK STANDARDS AND SPECS. SPECIFICATION NO's. 05100, 08210

[illegible]

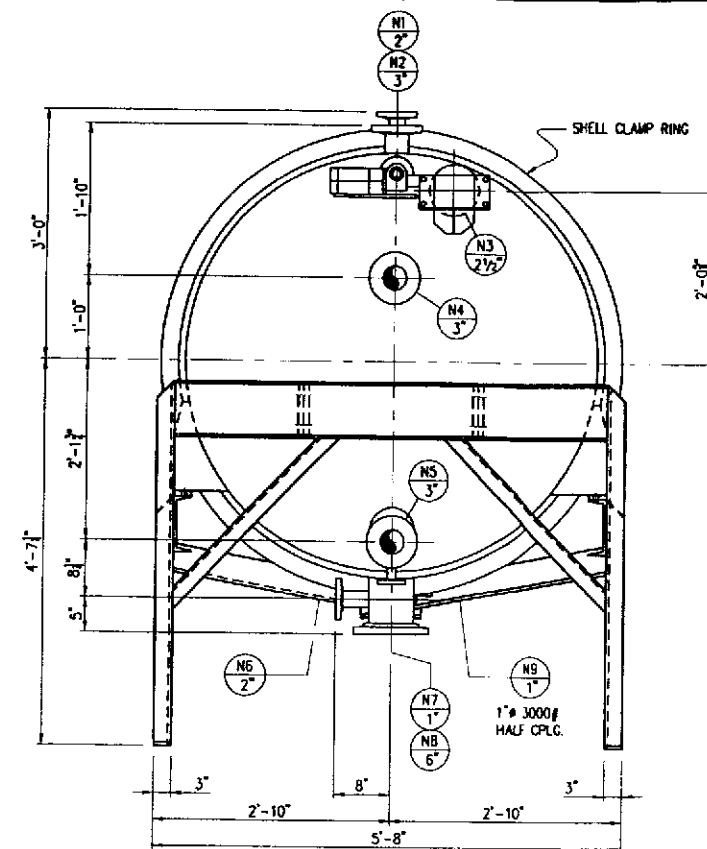
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STREET / P.O. BOX: _____			
CITY: _____	STATE: _____	ZIP: _____	
TELEPHONE No. ( ) _____	FAX No. ( ) _____		
ENGINEERING CONTACT: _____			
MFR. SERIAL No. : _____	SHOP ORDER No. : _____		
MFR. DWG. No. : _____	REV. : _____		

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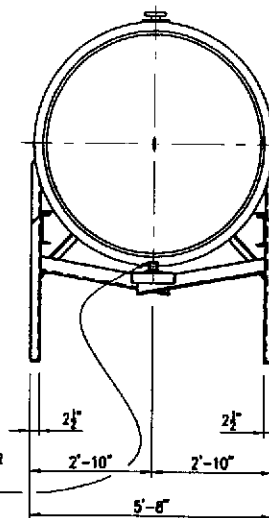
 <b>Vopak</b> <b>INDUSTRIAL SERVICES</b>		2759 Bottleground Road Deer Park, Texas 77536 (281) 604-6150	
<b>ENGINEER</b> 	<b>H &amp; M DESIGN, INC.</b> 8632 SPENCER HWY. LA PORTE, TEXAS 77571	PH / (281) 930-8750 FAX / (281) 830-8711 E-MAIL <a href="mailto:hnm@hmsdesigninc.com">hnm@hmsdesigninc.com</a>	
<b>DRAWN BY:</b> JAM	<b>DATE</b> 08/02	<b>PROJ. ENG.:</b>	
<b>CHECKED BY:</b>		<b>VOPAK ENG.:</b> PAM SMOLEN	<b>SCALE:</b> N.T.
<b>H&amp;M JOB #:</b>		<b>ENGINEER JOB NO.</b>	

AS BUILTS			
05-T-55 - PLAN, ELEVATION AND END VIEW			
STORAGE			
NOR#67			
Sht. size:	ACod File Name:	Drawing Number:	Rev.
D	05.60.T.55.1 REV.0 DWG	05.60.T.55.1	0

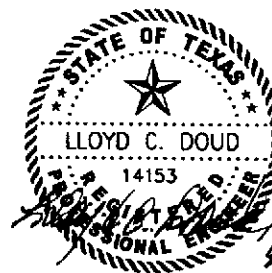




END VIEW  
LOOKING EAST



**END VIEW**  
**LOOKING WEST**



This Seal dated 9-19-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

F-1A

NATL. BD. 3785  
 CERTIFIED BY  
 THE DURON CO. INC.  
 FILTRATION SYSTEMS DIV.

SHELL:	MAWP	100	P.S.I. AT	150	°F.
	MOGMT	20	M.N. OFAT	100	P.S.I.
JACKET:	MAWP		P.S.I. AT		°F.
	MOGMT		M.N. OFAT		P.S.I.

SIN: 3785 - 1700 S.O. - 603646 YEAR BUILT: 1965

## MATERIALS OF CONSTRUCTION

TABLE 1. VESSEL AND SUPPORT MATERIALS		
	VESSEL OR SHELL SIDE	JACKET OR TUBE SIDE
SHELL	316 SS	
HEADS	316 SS	
FLANGES	316 SS	
NOZZLE NECKS	316 SS	
VESSEL SUPPORTS	C.S.	
INTERNAL BOLTS	316 SS	
NUTS	316 SS	
EXTERNAL BOLTS	316 SS	
NUTS	316 SS	
GASKETS	NEOPRENE	

### DESIGN CONDITIONS

DESIGN PRESS.	100 psi
DESIGN TEMP.	150 F
OPERATING PRESS.	
OPERATING TEMP.	
LOAD ALLOWED	
CODE	ASCE SECTION VIII, DIV. 1
CODE STAMP	
STRESS RELIEF	
RADIOGRAPH	
JOINT TEST	
HYDRO TEST	150 psi
SP. GR. CONTENTS	

## CAPACITIES AND WEIGHTS

OPERATING CAP.	958 Col.	
FULL CAPACITY		
EMPTY WEIGHT	4,250 lbs	
OPERATING WEIGHT	12,250 lbs	

### NOZZLE SCHEDULE

MARK	No.	SIZE	RATIO	FACING	T	O.S. PROJ.	TYPE	SERVICE
M1	1	2"	150%	MISS S.G.	154	6"		PRESSURE RELIEF
N2	1	3"	150%	MISS S.G.	218	SEE DWG.		WATER/SURGE
N3	1	-1/2"	150%	MISS S.G.	203	SEE DWG.		VALVE CONNECTION
M4	3	3"	150%	MISS S.G.	218	SEE DWG.		INLET (BAYED)
M5	1	3"	150%	MISS S.G.	218	SEE DWG.		REGULATION OUTLET
M6	1	2"	150%	MISS S.G.	154	SEE DWG.		BLOWDOWN
M7	1	1"	150%	MISS S.G.	133	6"		LEAF DRAIN
M8	1	6"	150%	MISS S.G.	280	SEE DWG.		DRAIN (OUTLET)

### GENERAL NOTES

## VOPAK REFERENCE DATA

PURCH. ORDER No.		PURCH. ORDER DATE	
ITEM NUMBER		ASSET NUMBER	

### MANUFACTURER DATA

MAIL NAME: \_\_\_\_\_  
STREET / P.O. BOX: \_\_\_\_\_  
CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_  
TELEPHONE No. ( ) \_\_\_\_\_ FAX No. ( ) \_\_\_\_\_  
ENGINEERING CONTACT: \_\_\_\_\_  
MFR. SERIAL No.: \_\_\_\_\_ SHOP ORDER No.: \_\_\_\_\_  
MFR. DWG. No.: \_\_\_\_\_ REV: \_\_\_\_\_


[illegible]

**NOTE:**

THIS DRAWING REDRAWN FROM EXISTING DURIRON COMPANY INC.  
DRAWING NO. D-03510-600-REV A. MATERIAL OF CONSTRUCTION  
& DESIGN CONDITIONS SHOWN ABOVE ARE REFERENCED FROM THIS  
DRAWING & NAMEPLATE ON TANK.



2759 Battleground Road  
Deer Park, Texas 77536  
(281) 604-6150

**ENGINEER**  **H & M DESIGN, INC.**  
8802 SPENCER HWY.  
LA PORTE, TEXAS 77571  
PH # (281) 930-8750  
FAX # (281) 930-8711  
E-MAIL [hnm@hmdesigninc.com](mailto:hnm@hmdesigninc.com)

DRAWN BY: ABG	DATE 08/02	PROJ. ENG.:
------------------	---------------	-------------

CHECKED BY:				VOPAK ENG.: PAM SMOLEN	SCALE: N.T.
-------------	--	--	--	---------------------------	----------------

H&M JOB #:				ENGINEER JOB NO.
------------	--	--	--	------------------

**AS BUILTS**

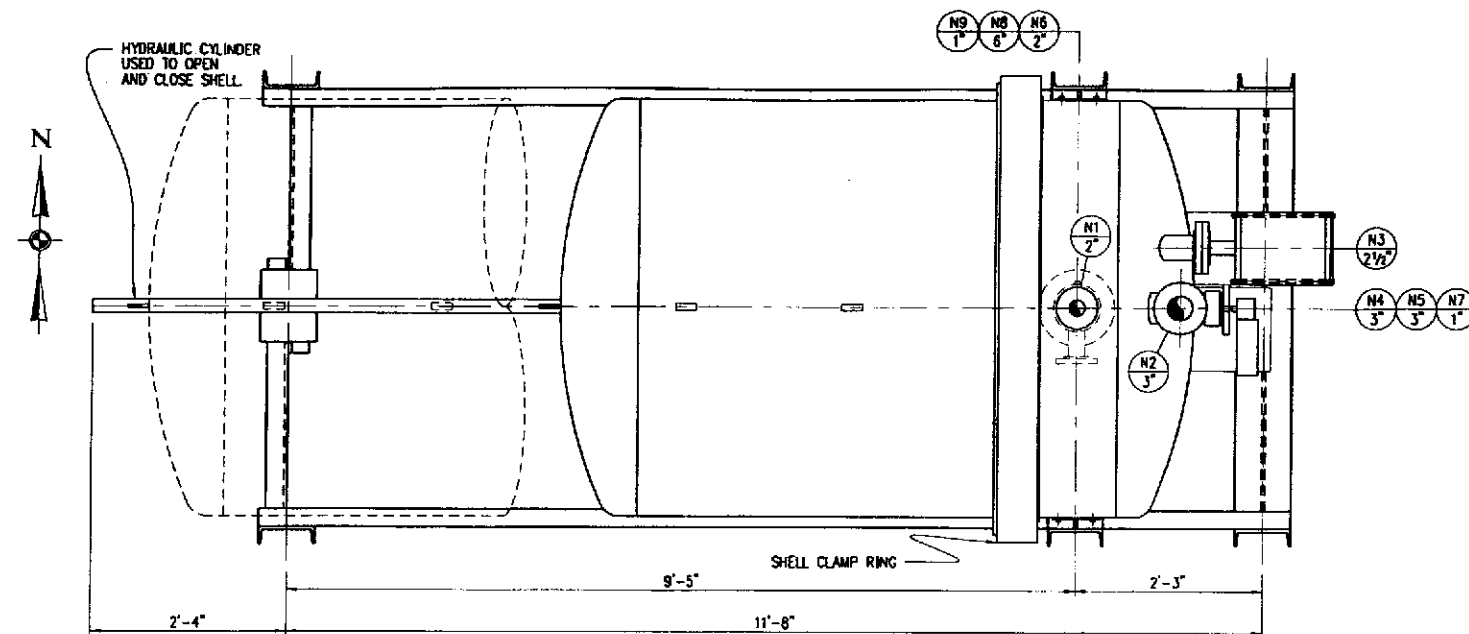
05-F-1A - PLAN, ELEVATION, & END VIEWS

## PRESSURE LEAF FILTER

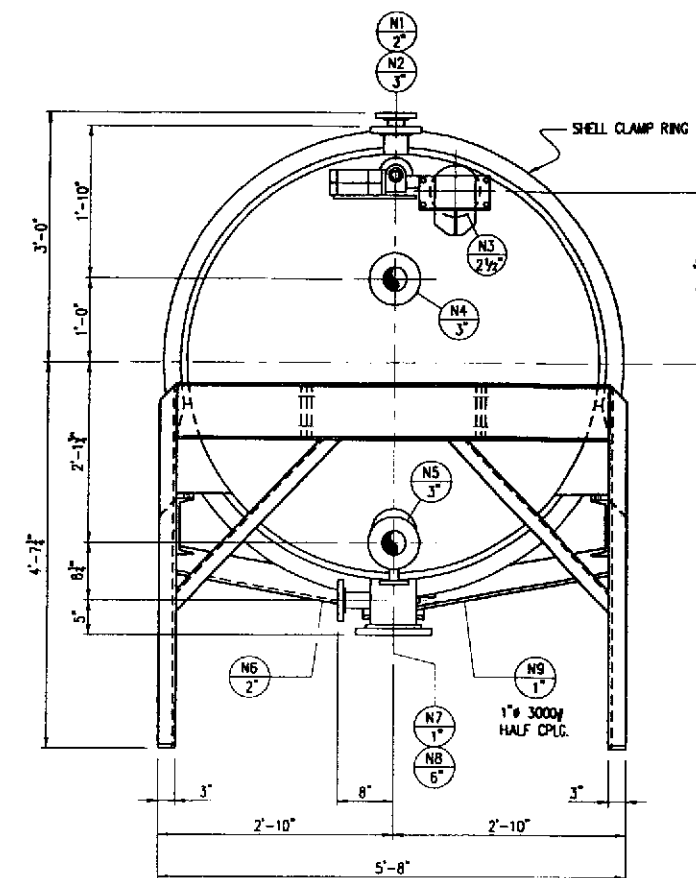
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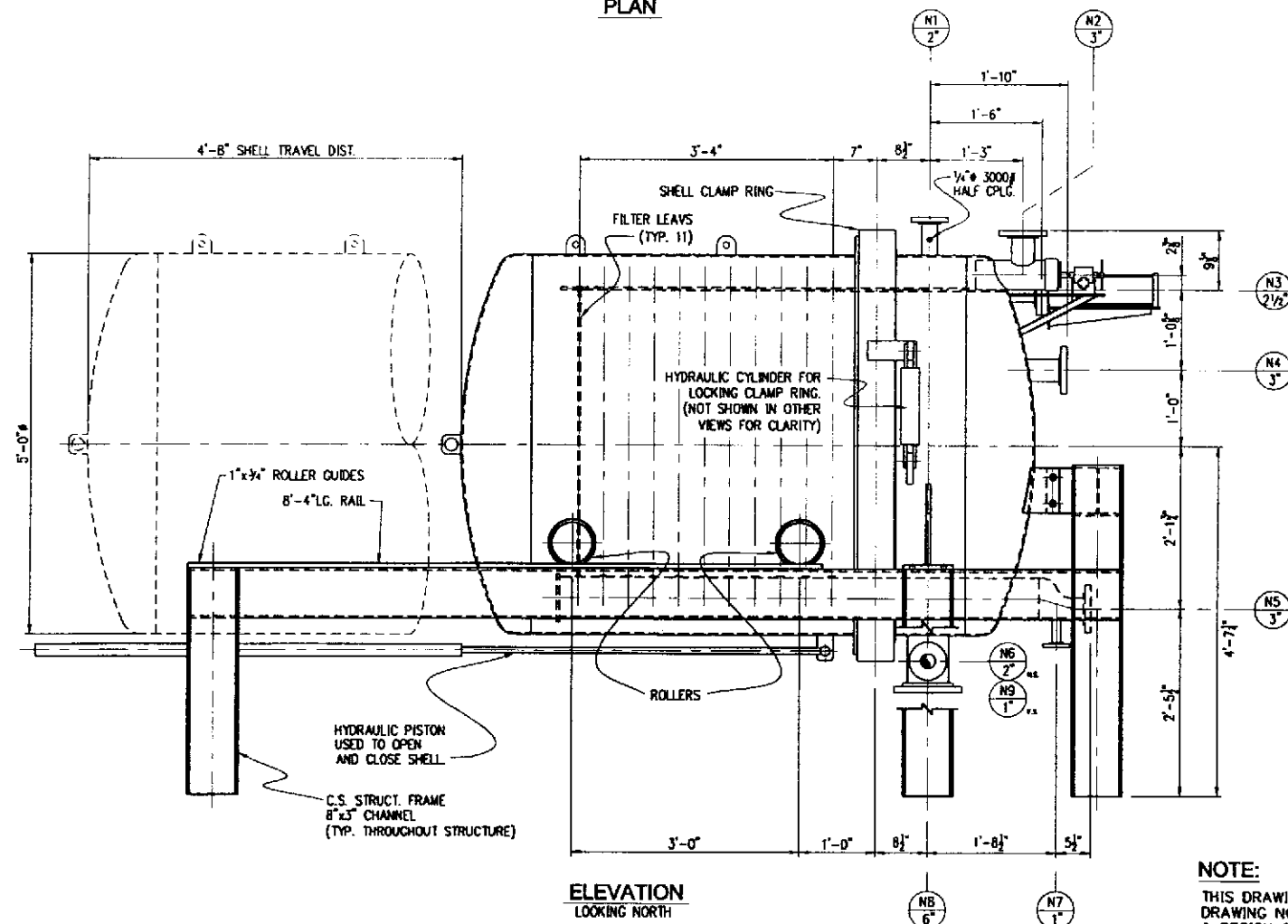
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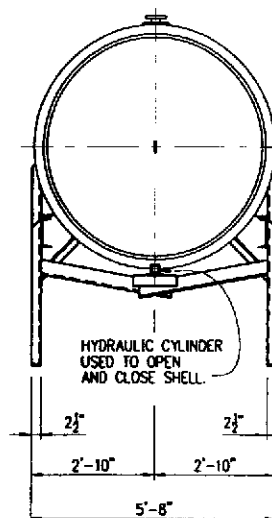
PLAN



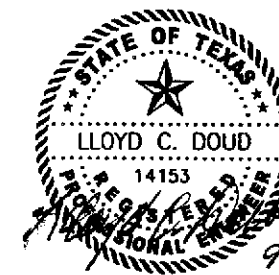
END VIEW  
LOOKING WEST



ELEVATION  
LOOKING NORTH



END VIEW  
LOOKING EAST



This Seal dated 9-19-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

# MATERIALS OF CONSTRUCTION

	VESSEL OR SHELL SIDE	JACKET OR TUBE SIDE
SHELL	316 SS	
HEADS	316 SS	
FLANGES	316 SS	
NOZZLE NECKS	316 SS	
VESSEL SUPPORTS	C.S.	
INTERNAL BOLTS	316 SS	
INTERNAL NUTS	316 SS	
EXTERNAL BOLTS	316 SS	
EXTERNAL NUTS	316 SS	
GASKETS	NEOPRENE	

## DESIGN CONDITIONS

DESIGN PRESS.	100 psig
DESIGN TEMP.	150 °F
OPERATING PRESS.	
OPERATING TEMP.	
CORR. ALLOWED	
CODE	ASME SECTION VIII DIV. 1
CODE STAMP	
STRESS RELIEF	
RADIOGRAPH	
JOINT EFF.	
HYDRO TEST	150 psig
SP. GR. CONTENTS	

## CAPACITIES AND WEIGHTS

OPERATING CAP.	850 Gals
FULL CAPACITY	
EMPTY WEIGHT	4,250 lbs
OPERATING WEIGHT	12,250 lbs

## NOZZLE SCHEDULE

MARK	NO.	SIZE	RATING	FACING	"T"	O.S. PROJ.	TYPE	SERVICE
N1	1	2"	150	WSS S.O.	.154	6"		PRESSURE RELIEF
N2	1	3"	150	WSS S.O.	.216	SEE DWG.		WATER/SLURRY
N3	1	2-1/2"	150	WSS S.O.	.203	SEE DWG.		VENTILATOR CONNECTION
N4	1	3"	150	WSS S.O.	.216	SEE DWG.		WET (DRAFTED)
N5	1	3"	150	WSS S.O.	.216	SEE DWG.		REGULATORY OUTLET
N6	1	2"	150	WSS S.O.	.154	SEE DWG.		BLOWDOWN
N7	1	1"	150	WSS S.O.	.133	4"		LEAF DRAIN
N8	1	6"	150	WSS S.O.	.280	SEE DWG.		DRAIN (OUTLET)
N9	1	1"	3000			SEE DWG.		

## GENERAL NOTES

## VOPAK REFERENCE DATA

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ITEM NUMBER	ITEM NUMBER	ITEM NUMBER	ASSET NUMBER

## MANUFACTURER DATA

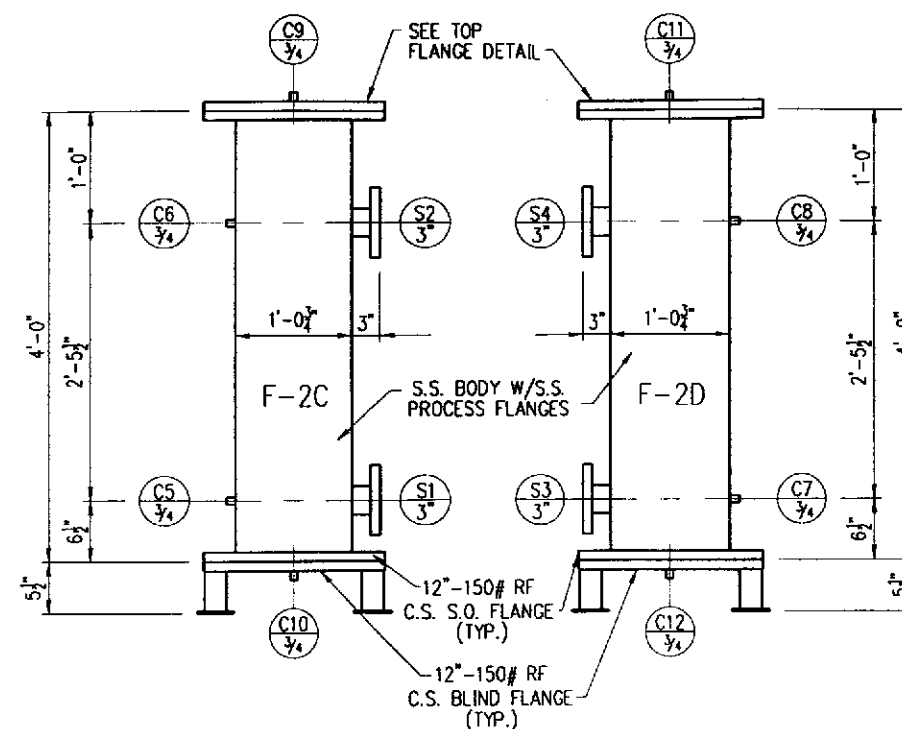
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STREET / P.O. BOX: _____		
CITY: _____	STATE: _____	ZIP: _____
TELEPHONE No.: ( _____ )	FAX No.: ( _____ )	
ENGINEERING CONTACT: _____		
MFR. SERIAL No.: _____	SHOP ORDER No.: _____	
MFR. DWG. No.: _____	REV.: _____	

NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	DRAWING NUMBER	REFERENCE DRAWINGS
0	FIELD VERIFIED & REDRAWN IN CAD	9/02	ABG					01-10-0001	DISPOSAL PLOT PLAN
								0-03510-600	600HC318 FILTER GENERAL ARRANGEMENT
								05-10-0016	DISPOSAL SITE PLAN - COATINGS

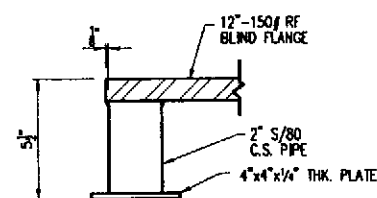
<b>Vopak</b> INDUSTRIAL SERVICES		2759 Bottleground Road Deer Park, Texas 77536 (281) 604-6150		<b>AS BUILT</b> 05-F-1B - PLAN, ELEVATION, & END VIEWS PRESSURE LEAF FILTER	
ENGINEER: H & M DESIGN, INC. 8502 SPENCER HWY. LA PORTE, TEXAS 77571		PH # (281) 930-8750 FAX # (281) 930-8711 E-MAIL: hnm@hnmdesigninc.com		NOR#79	
DRAWN BY: ABG DATE: 08/02		PROJ. ENG.: PAM SMOLEN SCALE: N.T.S.		Sh. size: D	
CHECKED BY:		ENGINEER JOB NO.:		ACad File Name: 05-60-F-1B-1-REV0.dwg	
H&M JOB #: 1160-VI		Drawing Number: 05-60-F-1B-1		Rev. 0	

TOP FLANGE  
DETAIL

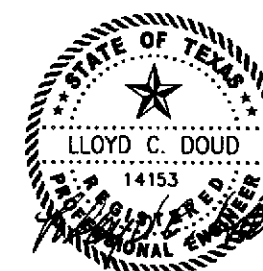
## PLAN



**ELEVATION**  
LOOKING EAST



**LEG DETAIL**  
(6 REQ'D)



This Seal dated 9-19-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

MATERIALS OF CONSTRUCTION		
	VESSEL OR SHELL SIDE	JACKET OR TUBE SIDE
SHELL	SS	-
HEADS	II/A	-
FLANGES	CS & SS	-
NOZZLE NECKS	-	-
VESSEL SUPPORTS	-	-
EXTERNAL BOLTS NUTS	-	-
EXTERNAL BOLTS NUTS	-	-
GASKETS	-	-

DESIGN CONDITIONS		
DESIGN PRESS.		
DESIGN TEMP.		
OPERATING PRESS.	60 PSI	
OPERATING TEMP.	70-150 F	
SCORE ALLOWED		
CODE		
CODE STAMP		
STRESS STAMP		
STRESS RELIEF		
RADIOGRAPH		
JOINT SET		
HYDRO TEST		
SP. GR. CONTENTS		

CAPACITIES AND WEIGHTS		
OPERATING CAP.	24 GAL. EA.	CU. FT.
FULL CAPACITY	GAL.	CU. FT.
EMPTY WEIGHT	LBS.	LBS.
OPERATING WEIGHT	LBS.	LBS.



NOZZLE SCHEDULE								
MARK	No	SIZE	INCH	FACING	T	O.S. PROJ.	TYPE	SERVICE
S1	1	3"	150	BF	3"			OUTLET
S2	1	3"	150	BF	3"			INLET
S3	1	3"	150	RF	3"			OUTLET
S4	1	3"	150	BF	3"			INLET
C5	1	3/4"	3000	NPT				PI
C6	1	3/4"	3000	NPT				PI
C7	1	3/4"	3000	NPT				PI
C8	1	3/4"	3000	NPT				VENT
C9	1	3/4"	3000	NPT				VENT
C10	1	3/4"	3000	NPT				DRAIN
C11	1	3/4"	3000	NPT				VENT
C12	1	3/4"	3000	NPT				DRAIN

GENERAL NOTES	
1.	SURFACE PREPARATION : NEAR WHITE METAL, BLAST SSPC-SP-10-1993.
2.	PAINTING: SHELL & HEAD - ZINC/EPoxy/POLYURETHANE
3.	LIST OF APPLICABLE VOPAK STANDARDS AND SPECS. SPECIFICATION NO's: 08100, 08210

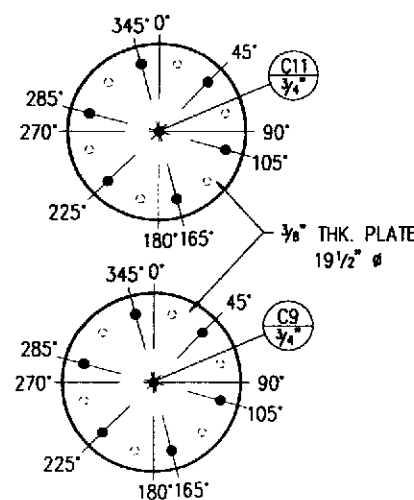
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STREET / P.O. BOX: _____			
CITY: _____		STATE: _____	ZIP: _____
TELEPHONE No.: ( ) _____		FAX No.: ( ) _____	
ENGINEERING CONTACT: _____			
MFR. SERIAL No.: _____		SHOP ORDER No.: _____	
MFR. DWG. No.: _____		REV.: _____	

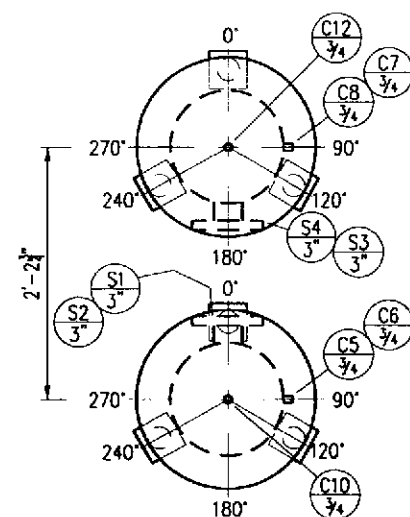
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 <b>Vopak</b> INDUSTRIAL SERVICES		2759 Battleground Road Deer Park, Texas 77536 (281) 604-8150	
ENGINEER	 H & M DESIGN, INC. 8002 SPENCER HWY. LA PORTE, TEXAS 77571	PH # (281) 830-8750 FAX # (281) 830-8711 E-MAIL hnm@hnmdesigninc.com	
DRAWN BY:	WP DATE 8/02	PROJ. ENG.:	
CHECKED BY:		VOPAK ENG.: P. SMOLLEN	SCALE: N.T.
H&M JOB #:	1160-VI	ENGINEER JOB NO.	

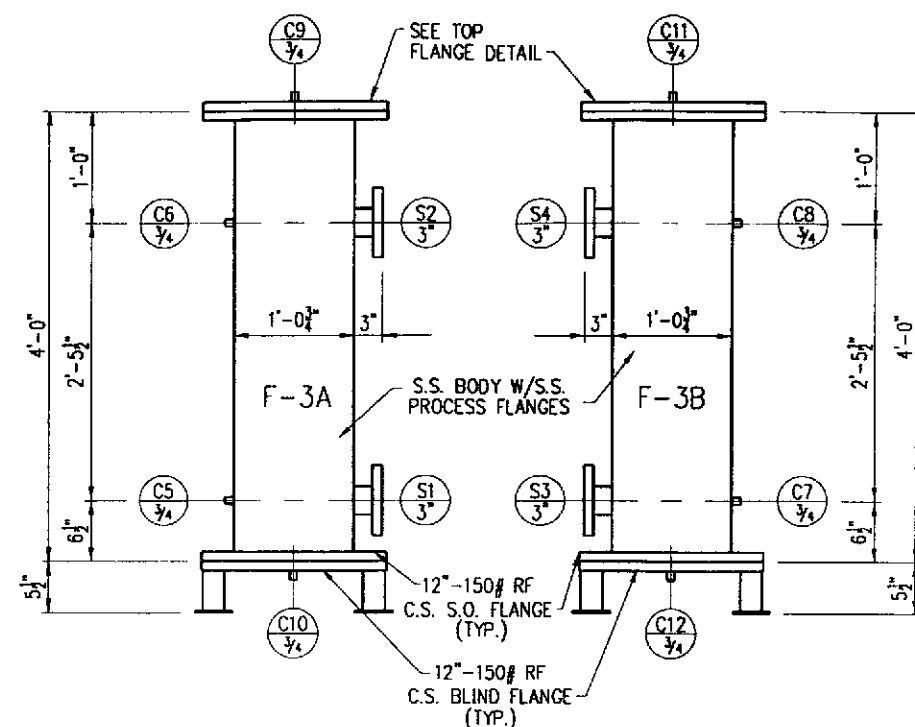
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	05-F-2-PLAN & ELEVATION		
	CARTRIDGE FILTER		
	NOR #69		
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			Rev. 0



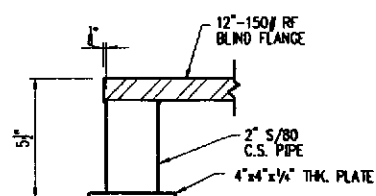
TOP FLANGE  
DETAIL



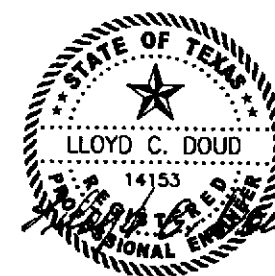
## PLAN



**ELEVATION**  
LOOKING EAST



**LEG DETAIL**  
(6 REQ'D)



This Seal dated 9-19-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

MATERIALS OF CONSTRUCTION		
	VESSEL OR SHELL SIDE	JACKET OR TUBE SIDE
SHELL	SS	-
HEADS	N/A	-
FLANGES	CS & SS	-
NOZZLE NECKS	-	-
VESSEL SUPPORTS	-	-
EXTERNAL BOLTS NUTS	-	-
EXTERNAL BOLTS NUTS	-	-
GASKETS	-	-

DESIGN CONDITIONS	
DESIGN PRESS.	
DESIGN TEMP.	
OPERATING PRESS.	60 PSI
OPERATING TEMP.	70-180 F
CORR. ALLOWED	
CODE	
CODE STAMP	
STRESS STAMP	
STRESS RELIEF	
RADIOGRAPH	
JOINT EFF.	
HYDRO TEST	
SP. GR. CONTENTS	

CAPACITIES AND WEIGHTS		
OPERATING CAP.	24 GAL. EA.	CU. FT.
FULL CAPACITY	GAL.	CU. FT.
EMPTY WEIGHT	LBS.	LBS.
OPERATING WEIGHT	LBS.	LBS.

NOZZLE SCHEDULE							
MARK	No.	SIZE	RATING	FACING	T	O.S. PROJ.	TYPE SERVICE
S1	1	1"	150	RF		1"	OUTLET
S2	1	1"	150	RF		1"	INLET
S3	1	1"	150	RF		1"	OUTLET
S4	1	1"	150	RF		1"	INLET
C5	1	1/2	3000	NPT			PI
C6	1	1/2	3000	NPT			PI
C7	1	1/2	3000	NPT			PI
C8	1	1/2	3000	NPT			PI
C9	1	1/2	3000	NPT			VENT
C10	1	1/2	3000	NPT			DRAIN
C11	1	1/2	3000	NPT			VENT
C12	1	1/2	3000	NPT			DRAIN

### GENERAL NOTES

1. SURFACE PREPARATION : NEAR WHITE METAL BLAST SSPC-SP-10-1988.
2. PAINTING: SHELL & HEAD - ZINC/EPOLY/POLYURETHANE
3. LIST OF APPLICABLE VOPAK STANDARDS AND SPECS.  
SPECIFICATION NO's. 08100, 08210

## VOPAK REFERENCE DATA

PURCH. ORDER No.		PURCH. ORDER DATE	
ITEM NUMBER	ASSET NUMBER	ITEM NUMBER	ASSET NUMBER



### MANUFACTURER DATA

**MANUFACTURER DATA**

MFR. NAME: \_\_\_\_\_  
STREET / P.O. BOX: \_\_\_\_\_  
CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_  
TELEPHONE No.: ( ) \_\_\_\_\_ FAX No.: ( ) \_\_\_\_\_  
ENGINEERING CONTACT: \_\_\_\_\_  
MFR. SERIAL No.: \_\_\_\_\_ SHOP ORDER No.: \_\_\_\_\_  
MFR. DWG. No.: \_\_\_\_\_ REV.: \_\_\_\_\_

CEA-00-NO

[illegible]

 <b>Vopak</b> <b>INDUSTRIAL SERVICES</b>		2759 Battleground Road Dear Park, Texas 77536 (281) 604-6150	
<b>ENGINEER</b> 	<b>H &amp; M DESIGN, INC.</b> 8602 SPENCER HWY. LA PORTE, TEXAS 77571	PH / (281) 930-8750 FX / (281) 930-8711 E-MAIL: hnm@hmdesigninc.com	
<b>DRAWN BY:</b> WP	<b>DATE</b> 8/02	<b>PROJ. ENG.:</b>	
<b>CHECKED BY:</b>		<b>VOPAK ENG.:</b> P. SMOLEN	<b>SCALE:</b> N.T.
<b>H&amp;M JOB #:</b> 1180-VI	<b>ENGINEER JOB NO.</b>		

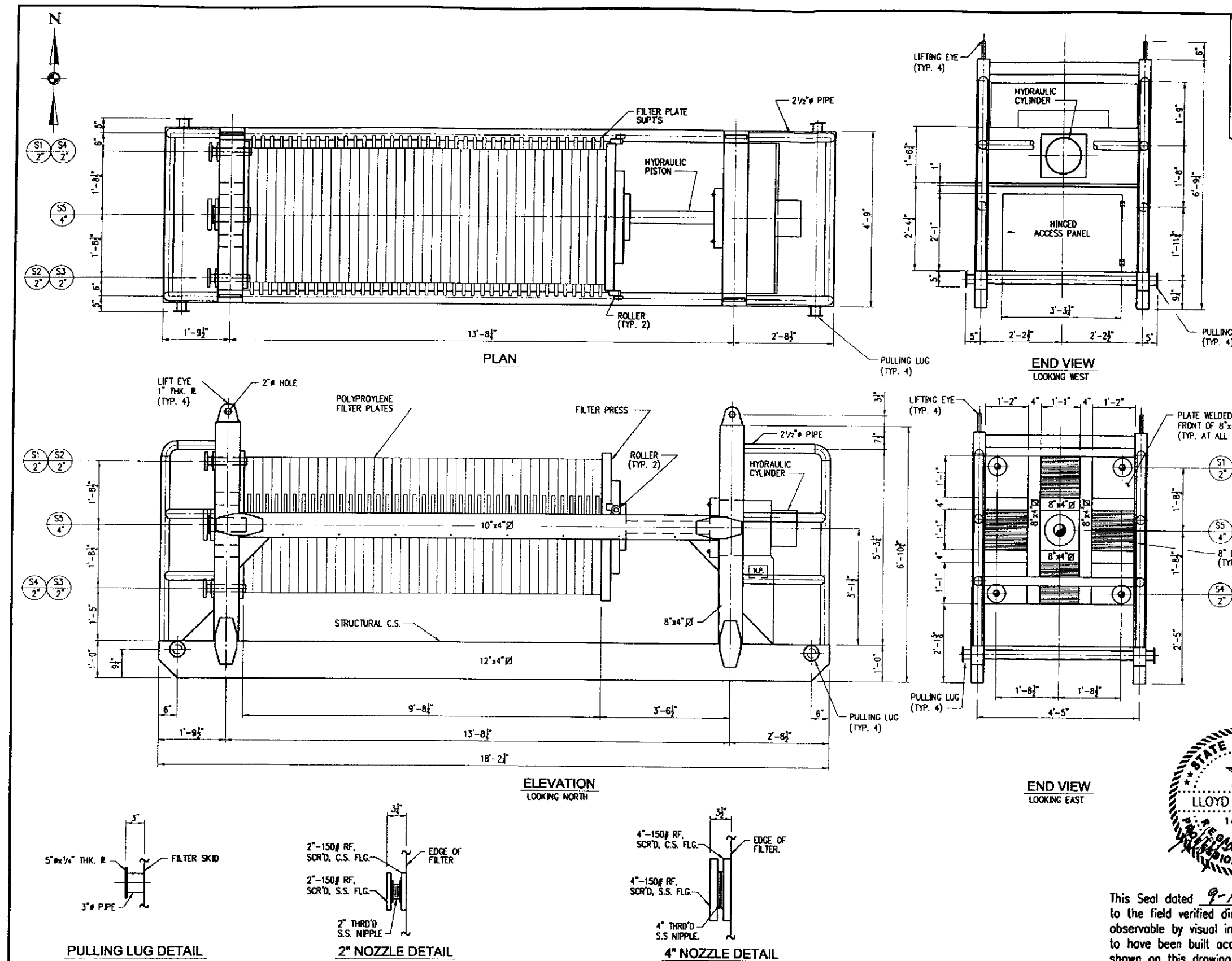
**AS BUILTS**

05-F-3-PLAN &amp; ELEVATION

## CARTRIDGE FILTER

**NOR #70**

Std. size:	ACad File Name:	Drawing Number:	Rev.
D	05-60-F-03-1-REV0.DWG	05-60-F-3-1	0



SERIAL: FP50021100F

**FLOTREND SYSTEMS**

MODEL:

STYLE:

707 LEHMAN  
HOUSTON TX, 77018

MATERIALS OF CONSTRUCTION	
FRAME	C.S.
PLATES	POLYPROPYLENE
FLANGES	
NOZZLE NECKS	S.S.
VESSEL SUPPORTS	
INTERNAL BOLTS	
EXTERNAL BOLTS	
NUTS	
GASKETS	

DESIGN CONDITIONS	
DESIGN PRESS.	
DESIGN TEMP.	
OPERATING PRESS.	70 PSI
OPERATING TEMP.	120 F.
CODE ALLOWED	
CODE	
CODE STAMP	
STRESS RELIEF	
RADIOGRAPH	
JOINT EFF.	
HYDRO TEST	
SP. GR. CONTENTS	

CAPACITIES AND WEIGHTS	
OPERATING CAP.	400 GAL
FILL CAPACITY	GAL
EMPTY WEIGHT	LBS.
OPERATING WEIGHT	LBS.

NOZZLE SCHEDULE	
MARK	NO.
S1	1
S2	2
S3	3
S4	4
S5	5

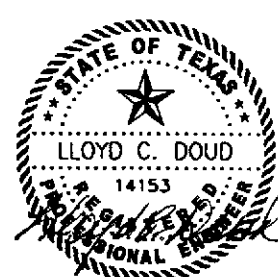
MARK	NO.	SIZE	RATING	FACING	1"	O.S. PROL. TYPE	SERVICE
S1	1	2"	150	W	3-1/4"	DISC. OULET	
S2	2	2"	150	W	3-1/4"	DISC. OULET	
S3	3	2"	150	W	3-1/4"	DISC. OULET	
S4	4	2"	150	W	3-1/4"	DISC. OULET	
S5	5	4"	150	W	3-1/2"	DISC. INLET	

GENERAL NOTES

VOPAK REFERENCE DATA			
PURCH. ORDER NO.	ITEM NUMBER	PURCH. ORDER DATE	1990
ITEM NUMBER	ASSET NUMBER	ITEM NUMBER	ASSET NUMBER

MANUFACTURER DATA	
MFR. NAME:	FLOTREND SYSTEMS
STREET / P.O. BOX:	707 LEHMAN
CITY:	HOUSTON
STATE:	TX
ZIP:	77018
TELEPHONE No.:	
FAX No.:	
ENGINEERING CONTACT:	
MFR. SERIAL No.:	
SHOP ORDER No.:	
MFR. DWG. No.:	

CEA-00-NO



This Seal dated 9-19-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	DRAWING NUMBER	REFERENCE DRAWINGS
0	FIELD VERIFIED AND DRAWN ON CAD	8/02	ABC					01-10-0001 DISPOSAL PLOT PLAN	
								05-10-0016 DISPOSAL SITE PLAN - COATINGS	

**Vopak INDUSTRIAL SERVICES**

2759 Battleground Road  
Deer Park, Texas 77536  
(281) 604-6150

ENGINEER: H&M DESIGN, INC.  
8602 SPENCER HWY.  
LA PORTE, TEXAS 77571

PH: (281) 930-8750  
FAX: (281) 930-8711  
E-MAIL: hmdesigninc.com

DRAWN BY: ABG DATE: 8/02

CHECKED BY:

H&M JOB #: 1160-VI

PROJ. ENG.:

VOPAK ENG.: PAM SMOLEN SCALE: N.T.S.

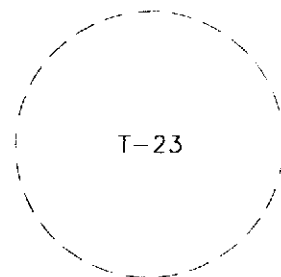
ENGINEER JOB NO. -PD

AS BUILTS	
05-F-4 - PLAN AND ELEVATION	
FILTER PRESS	
NOR#80	
Sht. size: D	ACad File Name: 05-60-4-1-REV0.DWG
Drawing Number: 05-60-F-4-1	Rev. 0

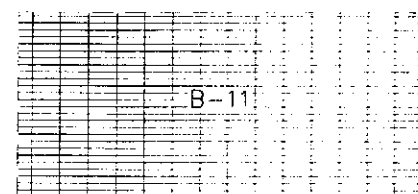


# Truck Pad Area Sump

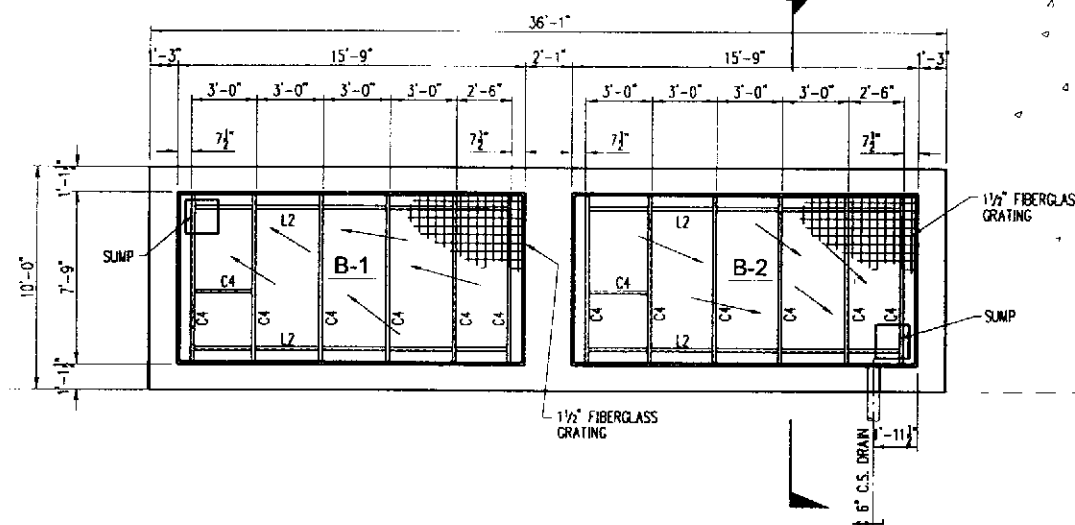
CSA	Rated Capacity (Gal.)	Sump Type	Container Size	Comments
05-B-1	7,687	Double Wall, C.S.	7'-6"x15'-6" x8'-10" Deep	Depth of 8'-10" Based on average elevation of sloped floor.
05-B-2	7,687	Double Wall, C.S.	7'-6"x15'-6" x8'-10" Deep	Depth of 8'-10" Based on average elevation of sloped floor.



T-23



B-11



PARTIAL PLAN  
SCALE: 1/4" = 1'-0"

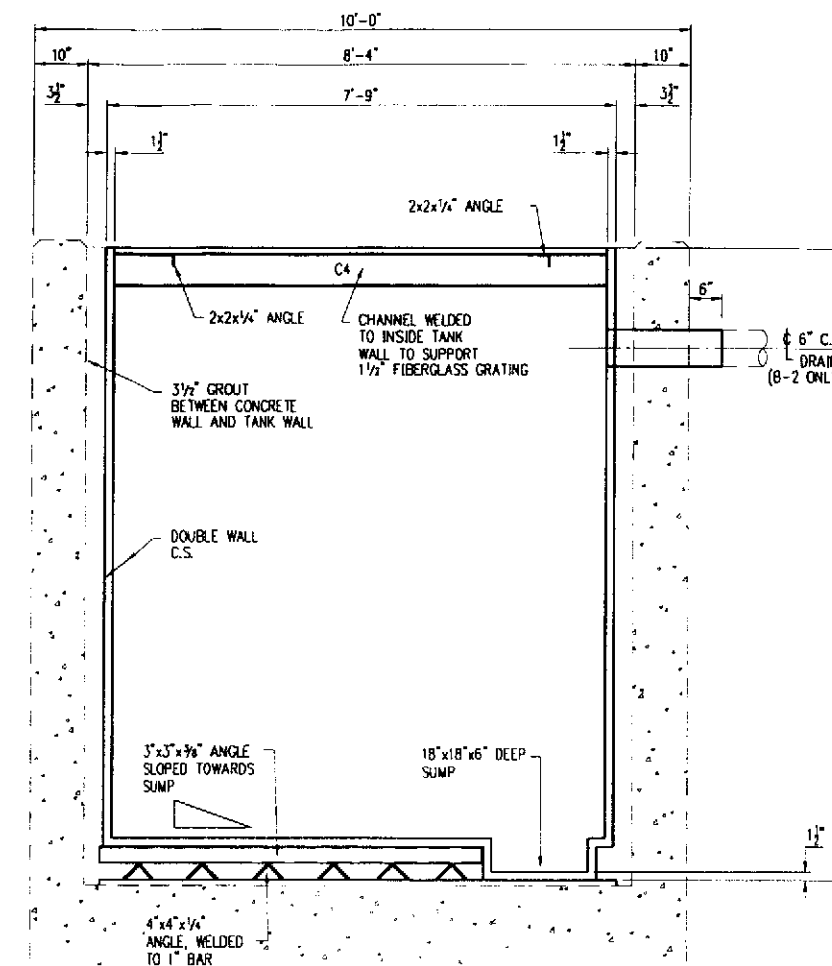
TRUCK UNLOADING AREA

## GENERAL NOTES:

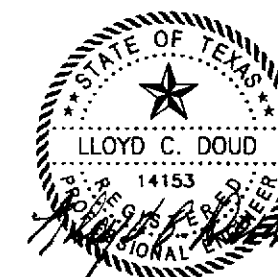
1. SURFACE PREPARATION: NEAR WHITE METAL BLAST SSPC-SP-10-1989.
2. PAINTING - INTERIOR - SIGMA 5490 SYS. OR EQUIVALENT @ 100 TO 125 MILS. EXTERIOR - EPOXY PHENOLIC.
3. LIST OF APPLICABLE SPECS SPECIFICATION No.'s 08100, 08240.

## NOTE:

THIS DRAWING IS REFERENCED FROM EXISTING BAKER TANK CO. DRAWING NO. D-10239.

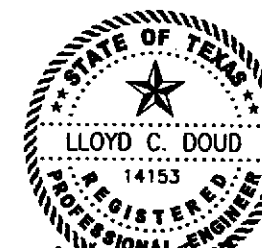
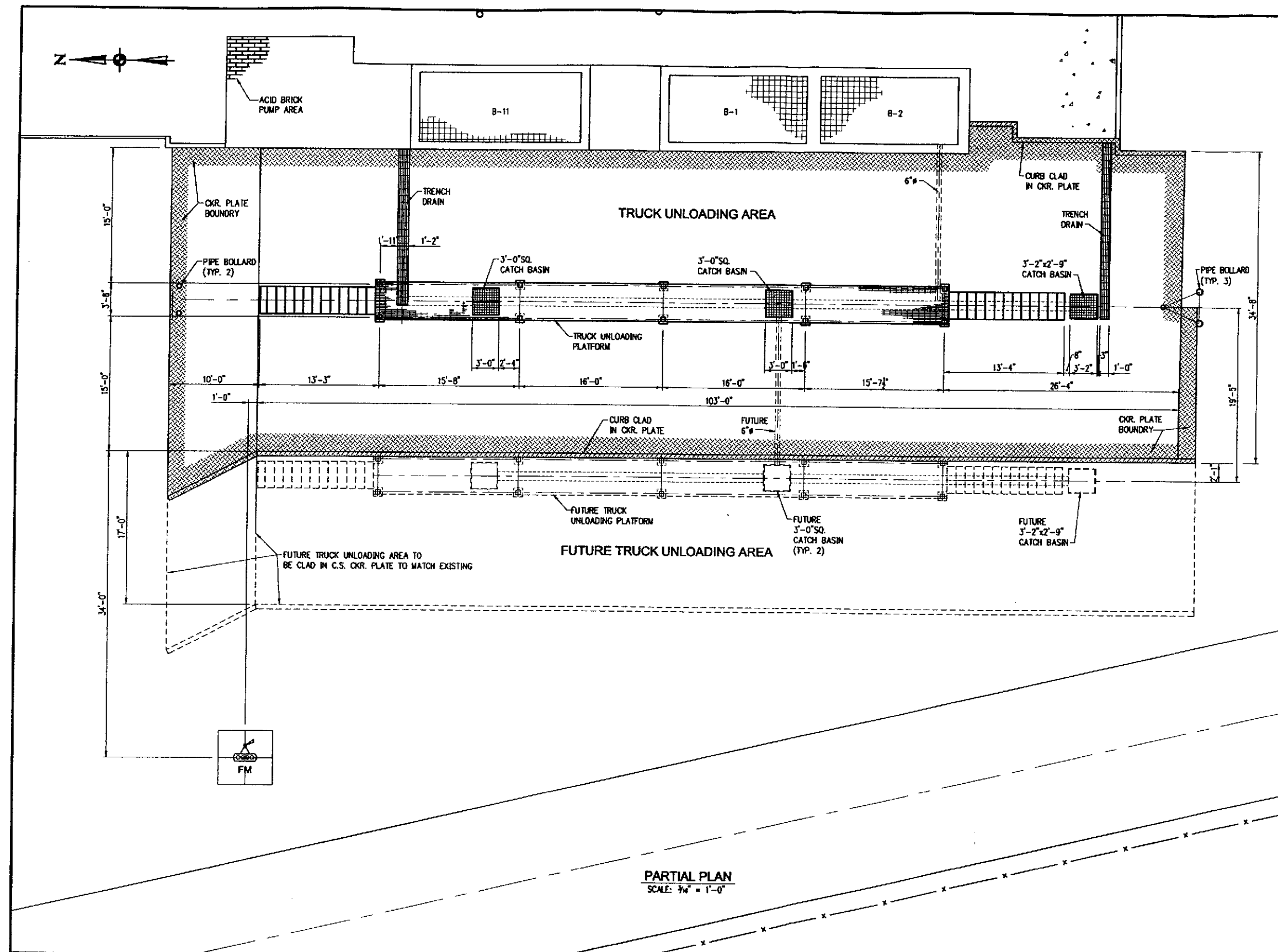


SECTION "A-A"



This Seal dated 9-19-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

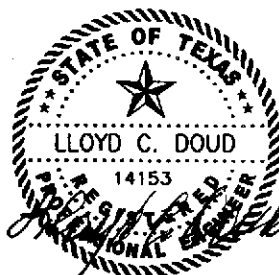
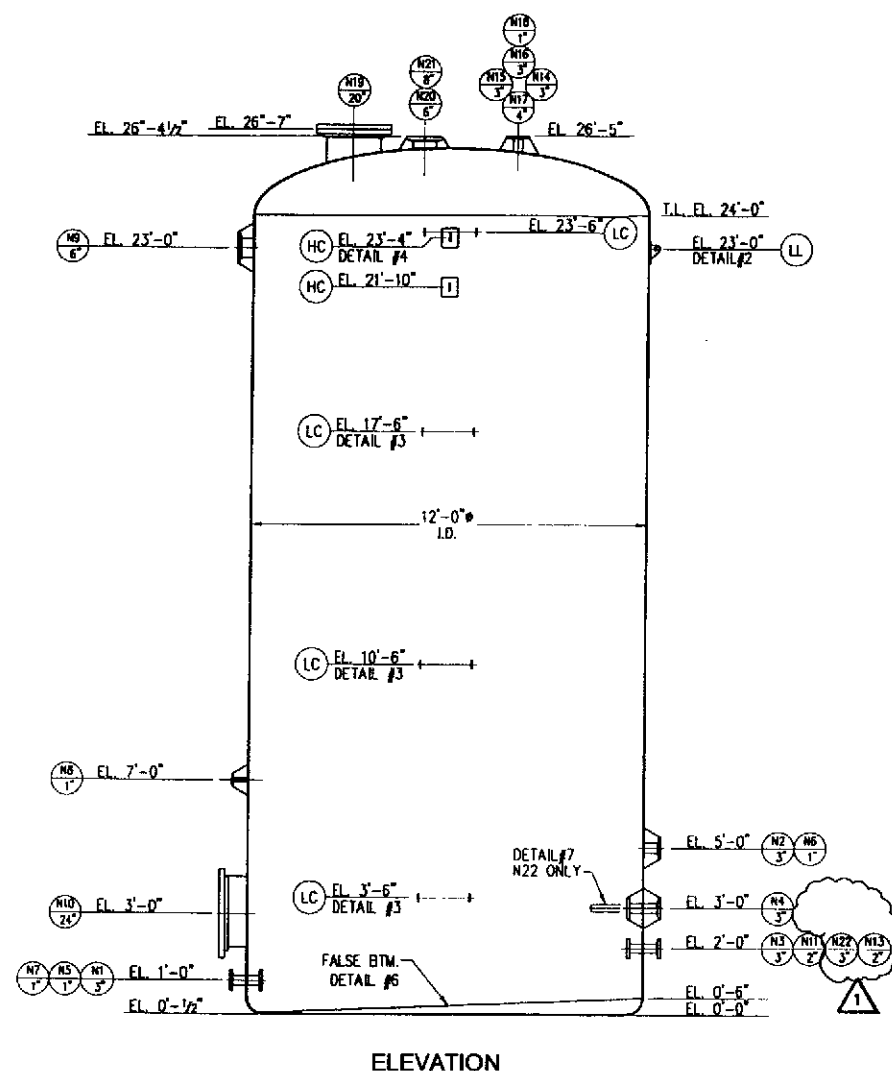
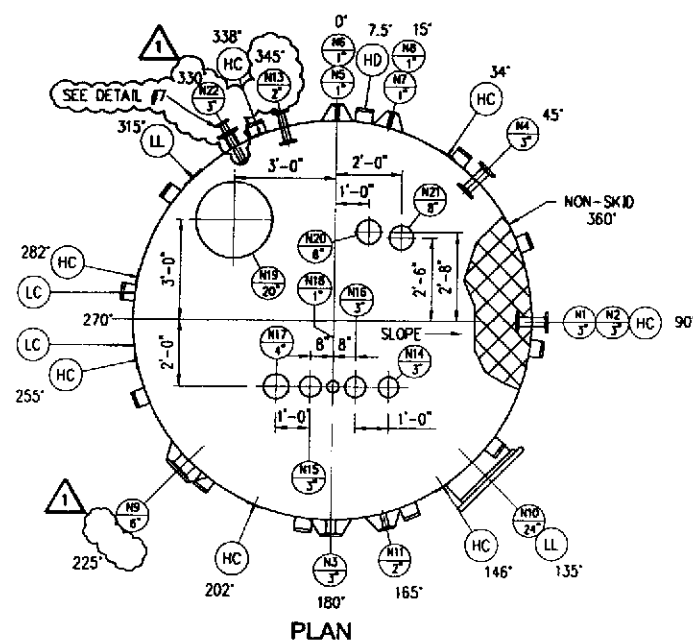
NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	DRAWING NUMBER	REFERENCE DRAWINGS	Vopak INDUSTRIAL SERVICES		AS BUILTS	
0	FIELD VERIFIED AND DRAWN ON CAD	8/02	CJD					01-10-0001	DISPOSAL PLOT PLAN	2759 Battleground Road Deer Park, Texas 77536 (281) 604-6150		05-B-1,05-B-2 - PARTIAL PLAN	
								0-10239	PAKTANK CORP. OPEN TOP DOUBLE WALL TANKS	ENGINEER H & M DESIGN, INC. 8602 SPENCER HWY. LA PORTE, TEXAS 77571 PH # (281) 930-8750 FAX # (281) 930-8711 E-MAIL hnm@hnmdesigninc.com		TRUCK PAD AREA SUMPS	
								05-10-0016	DISPOSAL SITE PLAN - COATINGS	DRAWN BY: CJD CHECKED BY: CJD H&M JOB #: 1150-VI		B-1 NOR#17, B-2 NOR#18	
										PROJ. ENG.: VOPAK ENG.: PAM SMOLEN ENGINEER JOB NO.		Drawing Number: 05-50-0033	
										SCALE: AS NOTED		Rev. 0	



*Lloyd C. Doud, P.E.*  
This Seal dated 11-5-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

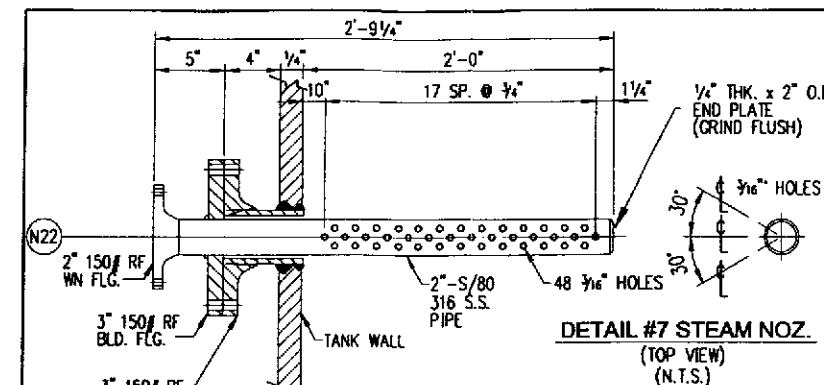
PARTIAL PLAN  
SCALE: 3/4" = 1'-0"

NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	DRAWING NUMBER	REFERENCE DRAWINGS	Vopak INDUSTRIAL SERVICES		AS BUILTS	
0	FIELD VERIFIED AND DRAWN ON CAD	10/02	JAM					01-10-0001	DISPOSAL PLOT PLAN	2759 Battleground Road Deer Park, Texas 77536 (281) 604-6150		TRUCK UNLOADING PAD	
								05-10-0016	DISPOSAL SITE PLAN - COATINGS	ENGINEER H&M DESIGN H & M DESIGN, INC. 8602 SPENCER HWY. LA PORTE, TEXAS 77571		PARTIAL PLAN	
										PH # (281) 930-8750 FAX # (281) 930-8711 E-MAIL: hmdesigninc.com		REF. B-1 & B-2 NOR #17	
										DRAWN BY: J.A.M. DATE: 10/22/02		ENGINEER: P. SMOLEN SCALE: AS NOTED	
										CHECKED BY:		D	
										H&M JOB #: 1160-02-VI		A	
										PROJECT: -PD		D	
										ACad File Name: 05-50-0035-REVA.DWG		D	
										Drawing Number: 05-50-0035		A	



This Seal dated 9-19-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

**NOTE:**  
THIS DRAWING REDRAWN FROM EXISTING IPP DRAWING 960429A-TX-0. MATERIALS OF CONSTRUCTION & DESIGN CONDITIONS ARE REFERENCED FROM THIS DRAWING.



VESSEL		DATE OF ORDER	5/96	YEAR BUILT	1996
MFG. OF EQUIP.	IPP	DESIGN OF	PSIG & F	PRESS. TEMP.	ATM. 250°
ORDER NO.	96227	EQUIP. NO.	574	QUALCORR 1001	QUALCORR 2001
SHELL 0'-7"	.725	TOP HEAD	.475	BOTTOM HEAD	.475
SHELL 7'-15"	.5375				
SHELL 15'-24"	.35				

#### GENERAL NOTES

- INDUSTRIAL PIPE AND PLASTICS TO PROVIDE PROTECTIVE SHIELDS FOR ALL FLANGES AND OPENINGS.
- INDUSTRIAL PIPE AND PLASTICS SHALL PROVIDE BOLTS AND HEX NUTS FOR ALL MATING PARTS INCLUDING BLIND FLANGES MATING PARTS INCLUDING BLIND FLANGES ONLY WHERE NOTED.
- APPLICABLE CLIENT STANDARDS AND SPECS.
- COLOR - NATURAL
- ALL NOZZLES THROUGH 5" INCLUSIVE RECIEVE BLADE TYPE GUSSETS UNLESS OTHERWISE NOTED.
- BOLT HOLES TO STRADDLE NAT'L C/L's.
- FLANGES THROUGH 24" DRILLED TO USA STD B16.5 FOR 150 PSI STL FLGS. ABOVE 24" TO B16.1 FOR 125 PSI CI FLGS. UNLESS OTHERWISE NOTED.
- ALL FRP FLANGES ARE FLAT FACED.
- INSULATION: POLYISOCYANURATE w/ 0.024" STUCCO ALUMINUM.
- LEAK DETECTION VIA V-NOTCH IN FOUNDATION.

MARK #	REQ'D NO.	NOZ. I.D. (d)	RATING (PSIG)	NECK THK. (tn)	FLG. THK. (tl)	FLG. O.D. (D)	QTY. BOLT.	DIA. BOLT.	DIA. HOLE	DIA. SPOT	BOLT CIRCLE (BC)	NOZ. PROJ. (PROJ)	BOLTS by IPP	REIN. THK. (tr)	REIN. DIA. (dr)	OUT. THK. (to)	OUT. HIGH (ho)	IN. THK. (ti)	IN. HIGH (hi)	R. RAD. (r)	REMARKS	
N1	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 3/4	6	6	NO	1/4	9	1/2	4	0.100	4	3/8	LOW PUMP SUCTION W/INT. FLANGE	
N2	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 3/4	6	6	NO	1/4	9	1/2	4	0.100	4	3/8	HIGH PUMP SUCTION	
N3	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 3/4	6	6	NO	1/4	9	1/2	4	0.100	4	3/8	TRUCK LINE INLET	
N4	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 3/4	6	6	NO	1/4	9	1/2	4	0.100	4	3/8	RE-CIRCULATION W/INT. FLANGE	
N5	1	1	150	1/4	1	4 3/8	4	1/2	3/8	1 1/8	3 1/8	6	NO	0	7	1/2	4	0.100	4	3/8	CHEMICAL ADDITION	
N6	1	1	150	1/4	1	4 3/8	4	1/2	3/8	1 1/8	3 1/8	6	NO	0	7	1/2	4	0.100	4	3/8	SAMPLE PORT	
N7	1	1	150	1/4	1	4 3/8	4	1/2	3/8	1 1/8	3 1/8	6	NO	0	7	1/2	4	0.100	4	3/8	TEMPERATURE INDICATOR	
N8	1	1	150	1/4	1	4 3/8	4	1/2	3/8	1 1/8	3 1/8	6	NO	0	7	1/2	4	0.100	4	3/8	TEMPERATURE INDICATOR	
N9	1	6	150	3/8	1 1/8	11	8	3/4	3/8	2	9 1/2	6	NO	1/2	12	1/2	3	0.100	3	3/8	OVERFLOW	
N10	1	24	35	1/2	1 3/8	32	20	1 1/4	1 3/8	3	29 1/2	10	YES	1/2	48	1/2	4	0.100	4	3/8	MANWAY W/ COVER	
N11	1	2	150	1/4	1	6	4	3/8	3/4	1 3/4	4 3/8	6	NO	3/8	8	1/2	4	0.100	4	3/8	ACID	
N12	1	2	150	1/4	1	6	4	3/8	3/4	1 3/4	4 3/8	6	NO	3/8	8	1/2	4	0.100	4	3/8	- NOT USED -	
N13	1	2	150	1/4	1	6	4	3/8	3/4	1 3/4	4 3/8	6	NO	3/8	8	1/2	4	0.100	4	3/8	AIR/N <sub>2</sub>	
N14	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 3/4	6	SEE EL.	NO	1/4	9	1/2	4	0.100	4	3/8	P/V VENT	
N15	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 3/4	6	SEE EL.	NO	1/4	9	1/2	4	0.100	4	3/8	VAPOR VENT	
N16	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 3/4	6	SEE EL.	NO	1/4	9	1/2	4	0.100	4	3/8	LEVEL/INTERFACE	
N17	1	4	150	1/4	1	9	8	3/8	3/4	1 3/4	7 1/2	SEE EL.	NO	3/8	10	1/2	4	0.100	4	3/8	FUTURE N <sub>2</sub>	
N18	1	1	150	1/4	1	4 3/8	4	1/2	3/8	1 1/8	3 1/8	SEE EL.	NO	0	7	1/2	4	0.100	4	3/8	HIGH LEVEL ALARM	
N19	1	20	35	1/2	1 3/8	27 1/2	20	1 1/4	1 3/8	3	29 1/2	25	SEE EL.	YES	1/2	40	1/2	4	0.100	4	3/8	MANWAY / EMER. VENT
N20	1	6	150	1/2	1 1/8	13 1/2	8	3/4	3/8	2	11 3/4	SEE EL.	NO	1/2	14	1/4	3	0.100	3	3/8	SPARE	
N21	1	8	150	1/2	1 1/8	13 1/2	8	3/4	3/8	2	11 3/4	SEE EL.	NO	1/2	14	1/4	3	0.100	3	3/8	GAGE HATCH	
N22	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 3/4	6	4	NO	3/8	8	1/2	4	0.100	4	3/8	STEAM W/2" S.S. STUB PIPE (DTL. #7)	

CONSTRUCTION SEQUENCE		THICKNESS		LOCATION	MATERIAL LEGEND	
CORROSION	STRUCTURAL	CORROSION	STRUCTURAL			
V,MM	10M	0.100	0.375	DISH HEAD	V	- C-VEIL
V,MM	FW @ 55°	0.100	0.250	SHELL 15'-24"	M	- 1 1/2 OZ. MAT
V,MM	FW @ 55°	0.100	0.4375	SHELL 7'-15"	R	- WOVEN ROVING
V,MM	FW @ 55°	0.100	0.625	SHELL 0'-7"	N	- NEXUS
V,MM	10M	0.100	0.375	FLAT BTM.	FW	- FILAMENT WINDING
V,MM				SLOPE	C	- CHOPPED
					3/4 M	- 3/4 OZ. MAT.

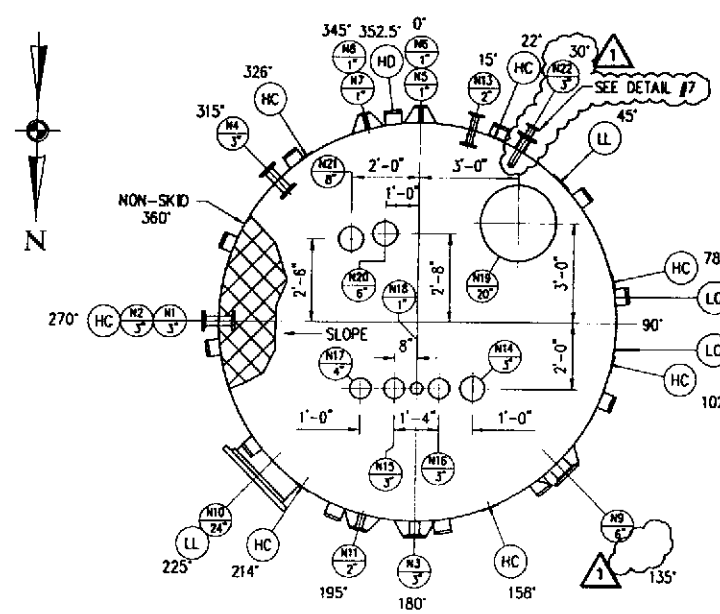
CEA-96-187

NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	DRAWING NUMBER	REFERENCE DRAWINGS
A	ISSUE FOR REVIEW	10/00	AG					01-10-0001	DISPOSAL PLOT PLAN
D	ISSUE FOR CONSTRUCTION	02/01	AG					05-30-0008	05-T-574 & 05-T-575 SYSTEM P&ID
1	AS BUILT	08/02	JAM					05-10-0014	SECONDARY CONTAINMENT - T-574
								05-50-0007	DIKE WALL EXPANSION PLAN & SECTIONS
								05-50-0009	FOUNDATION SECTIONS 05-T-574
								960429-TX-0	IPP - TANK T-574

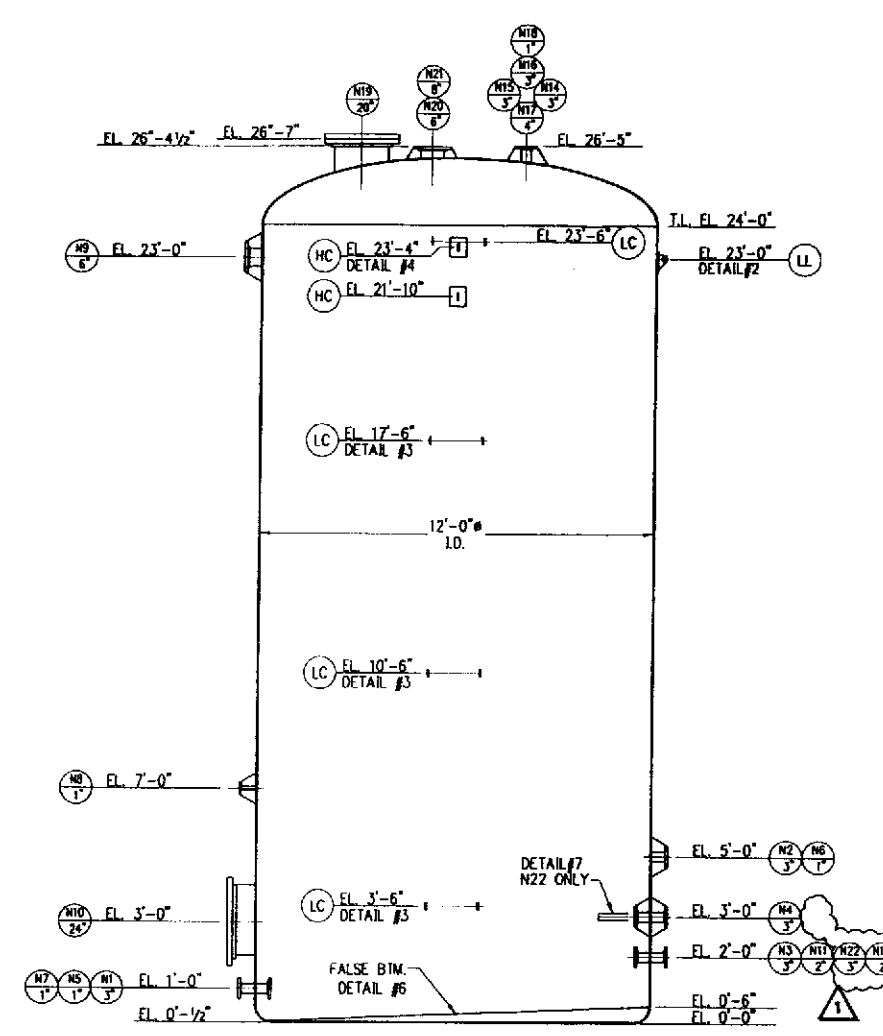
<b>Vopak</b> INDUSTRIAL SERVICES		2759 Bottleground Road Deer Park, Texas 77536 (281) 604-6150	
ENGINEER	H & M DESIGN, INC. 8602 SPENCER HWY. LA PORTE, TEXAS 77571	PH # (281) 930-8750 FAX # (281) 930-8711 E-MAIL hnm@hnmdesigninc.com	
DRAWN BY:	AG	DATE	11/00
CHECKED BY:			
H&M JOB #:	760-EM	PROJ. ENG.:	
		VOPAK ENG.:	PAM SMOLEN
		SCALE:	NTS
		ENGINEER JOB NO.:	

REPORTS FOR RCRA PART "B"			
FABRICATION DETAILS FOR 05-T-574			
EMULSIFIED OIL TANK SYSTEM			
NOR #81			
Sht. size:	ACad File Name:	Drawing Number:	Rev.
D	5-60-T-574-1-REV1.dwg	05-60-T-574-1	1

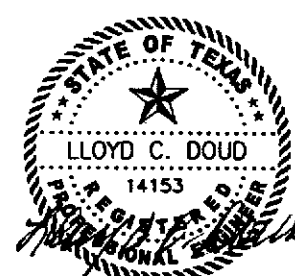




PLAN

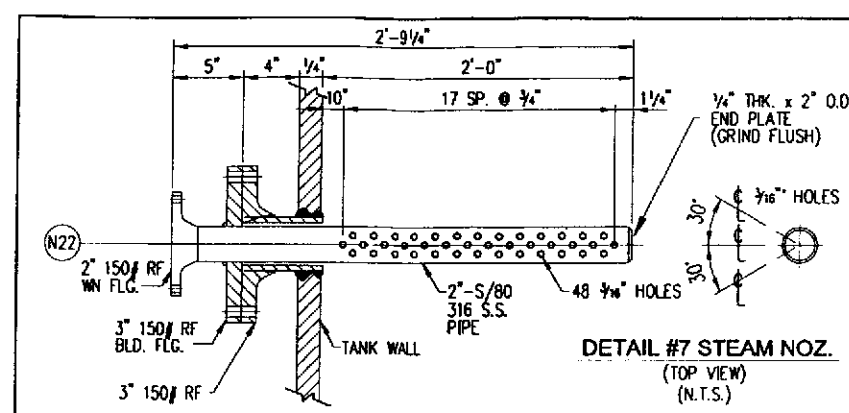


ELEVATION



This Seal dated 9-19-02 is only applicable to the field verified dimensions and those components observable by visual inspection; the facilities appear to have been built according to the information shown on this drawing and the referenced drawings (Lloyd C. Doud, P.E. #14153).

**NOTE:**  
THIS DRAWING REDRAWN FROM EXISTING IPP DRAWING 9604298-TX-0. MATERIALS OF CONSTRUCTION & DESIGN CONDITIONS ARE REFERENCED FROM THIS DRAWING.



<b>VESSEL</b>		DATE OF ORDER	5/96	YEAR BUILT	1996
MFG. OF EQUIP.	IPP	DESIGN OF	PSIG & F	PRESS. TEMP.	ATM. 250°
ORDER NO.	96227	QUALCORR 1001			
EQUIP. NO.	575	QUALCORR 2001			
SHELL 0'-7"	.725	TOP HEAD	.475	BOTTOM HEAD	.475
SHELL 7'-15"	.5375				
SHELL 15'-24"	.35				

GENERAL NOTES

- INDUSTRIAL PIPE AND PLASTICS TO PROVIDE PROTECTIVE SHIELDS FOR ALL FLANGES AND OPENINGS.
- INDUSTRIAL PIPE AND PLASTICS SHALL PROVIDE BOLTS AND HEX NUTS FOR ALL MATING PARTS INCLUDING BLIND FLANGES MATING PARTS INCLUDING BLIND FLANGES ONLY WHERE NOTED.
- APPLICABLE CLIENT STANDARDS AND SPECS.
- COLOR - NATURAL
- ALL NOZZLES THROUGH 5" INCLUSIVE RECEIVE BLADE TYPE GUSSETS UNLESS OTHERWISE NOTED.
- BOLT HOLES TO STRADDLE NAT'L C/L's
- FLANGES THROUGH 24" DRILLED TO USA STD B16.5 FOR 150 PSI STL FLGS. ABOVE 24" TO B16.1 FOR 125 PSI CI FLGS. UNLESS OTHERWISE NOTED.
- ALL FRP FLANGES ARE FLAT FACED.
- INSULATION: POLYISOCYANURATE w/ 0.024" STUCCO ALUMINUM.
- LEAK DETECTION VIA V-NOTCH IN FOUNDATION.

MARK #	REQ'D NO.	NOZ. I.D. (d)	RATING (PSIG)	NECK THK. (in)	FLG. THK. (in)	FLG. O.D. (D)	QTY.	DIA. BOLT.	DIA. HOLE	DIA. SPOT	BOLT CIRCLE (BC)	NOZ. PROJ. (PROJ.)	BOLTS BY IPP	REINF. THK. (tr)	REINF. DIA. (dr)	OUT. THK. (to)	OUT. HIGH (ho)	IN. THK. (ti)	IN. HIGH (hi)	R. RAO. (r)	REMARKS
N1	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 3/4	6	6	NO	1/4	9	1/2	4	0.100	4	3/8	LOW PUMP SUCTION W/INT. FLANGE
N2	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 3/4	6	6	NO	1/4	9	1/2	4	0.100	4	3/8	HIGH PUMP SUCTION
N3	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 3/4	6	6	NO	1/4	9	1/2	4	0.100	4	3/8	TRUCK LINE INLET
N4	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 3/4	6	6	NO	1/4	9	1/2	4	0.100	4	3/8	RE-CIRCULATION W/INT. FLANGE
N5	1	1	150	1/4	1	4 3/8	4	1/2	3/8	1 1/8	3 1/8	6	NO	0	7	1/2	4	0.100	4	3/8	CHEMICAL ADDITION
N6	1	1	150	1/4	1	4 3/8	4	1/2	3/8	1 1/8	3 1/8	6	NO	0	7	1/2	4	0.100	4	3/8	SAMPLE PORT
N7	1	1	150	1/4	1	4 3/8	4	1/2	3/8	1 1/8	3 1/8	6	NO	0	7	1/2	4	0.100	4	3/8	TEMPERATURE INDICATOR
N8	1	1	150	1/4	1	4 3/8	4	1/2	3/8	1 1/8	3 1/8	6	NO	0	7	1/2	4	0.100	4	3/8	TEMPERATURE INDICATOR
N9	1	6	150	3/8	1 1/8	11	8	3/4	3/8	2	9 1/2	6	NO	1/2	12	1/4	3	0.100	3	3/8	OVERFLOW
N10	1	24	35	1/2	1 3/8	32	20	1 1/4	1 3/8	3	29 1/2	10	YES	1/2	48	1/2	4	0.100	4	3/8	MANWAY W/ COVER
N11	1	2	150	1/4	1	6	4	3/8	3/4	1 3/4	4 3/4	6	NO	3/16	8	1/2	4	0.100	4	3/8	ACID
N12																					NOT USED -
N13	1	2	150	1/4	1	6	4	3/8	3/4	1 3/4	4 3/4	6	NO	3/16	8	1/2	4	0.100	4	3/8	AIR/N <sub>2</sub>
N14	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 3/4	6	SEE EL	NO	1/4	9	1/2	4	0.100	4	3/8	P/V VENT
N15	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 3/4	6	SEE EL	NO	1/4	9	1/2	4	0.100	4	3/8	VAPOR VENT
N16	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 3/4	6	SEE EL	NO	1/4	9	1/2	4	0.100	4	3/8	LEVEL/INTERFACE
N17	1	4	150	1/4	1	9	8	3/8	3/4	1 3/4	7 1/2	SEE EL	NO	3/8	10	1/2	4	0.100	4	3/8	FUTURE N <sub>2</sub>
N18	1	1	150	1/4	1	4 3/8	4	1/2	3/8	1 1/8	3 1/8	SEE EL	NO	0	7	1/2	4	0.100	4	3/8	HIGH LEVEL ALARM
N19	1	20	35	1/2	1 3/8	27 1/2	20	1 1/4	1 3/8	2 3/4	25	SEE EL	YES	1/2	40	1/2	4	0.100	4	3/8	MANWAY / EMER. VENT
N20	1	6	150	1/2	1 1/8	13 1/2	8	3/4	3/8	2	11 3/4	SEE EL	NO	1/2	14	1/4	3	0.100	3	3/8	SPARE
N21	1	8	150	1/2	1 1/8	13 1/2	8	3/4	3/8	2	11 3/4	SEE EL	NO	1/2	14	1/4	3	0.100	3	3/8	GAGE HATCH
N22	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 3/4	6	4	NO	3/16	8	1/2	4	0.100	4	3/8	STEAM W/2\" S.S. STUB PIPE (DTL. #7)

CONSTRUCTION SEQUENCE				THICKNESS		LOCATION		MATERIAL LEGEND	
CORROSION	STRUCTURAL	CORROSION	STRUCTURAL					V	C-VEIL
V,MM	10M		0.100	0.375		DISH HEAD		M	1 1/2 OZ. MAT
V,MM	FW @ 55°		0.100	0.250		SHELL 15'-24'		R	WOVEN ROVING
V,MM	FW @ 55°		0.100	0.4375		SHELL 7'-15'		N	NEXUS
V,MM	FW @ 55°		0.100	0.625		SHELL 0'-7'		FW	FILAMENT WINDING
V,MM	10M		0.100	0.375		FLAT BTM.		C	CHOPPED
V,MM						SLOPE		3/4 M	3/4 OZ. MAT

NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	DRAWING NUMBER	REFERENCE DRAWINGS
A	ISSUE FOR REVIEW	10/00	AG					01-10-0001	DISPOSAL PLOT PLAN
O	ISSUE FOR CONSTRUCTION	02/01	AG					05-30-0008	05-T-574 & 05-T-575 SYSTEM PAID
1	AS BUILT	08/02	JAM					05-10-0014	SECONDARY CONTAINMENT - T-575
								05-50-0007	DKE WALL EXPANSION PLAN & SECTIONS
								05-50-0009	FOUNDATION SECTIONS 05-T-575
								9604298-TX-0	IPP - TANK T-575

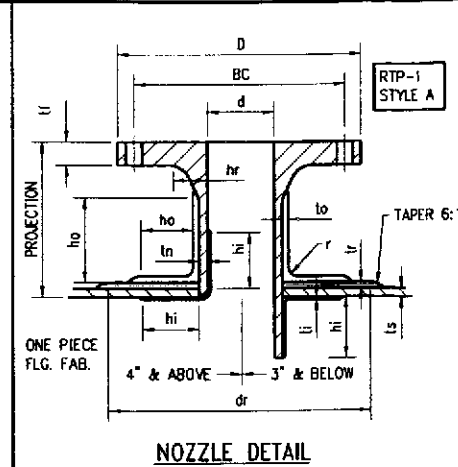
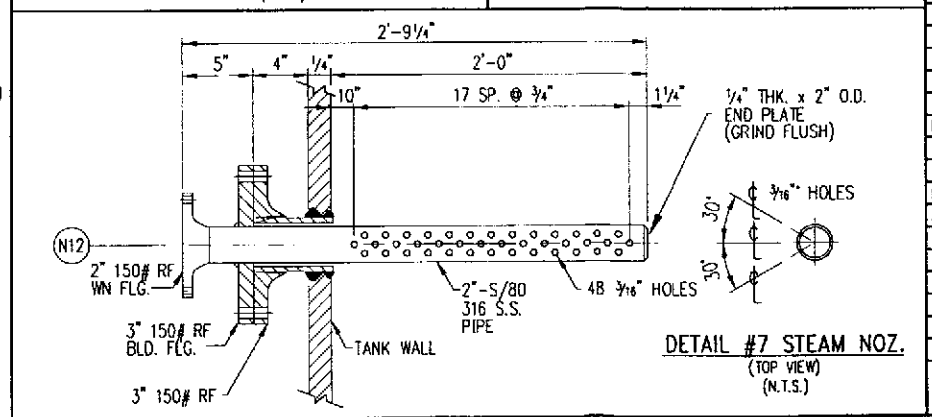
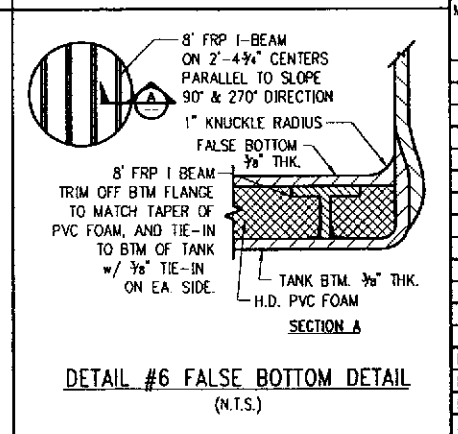
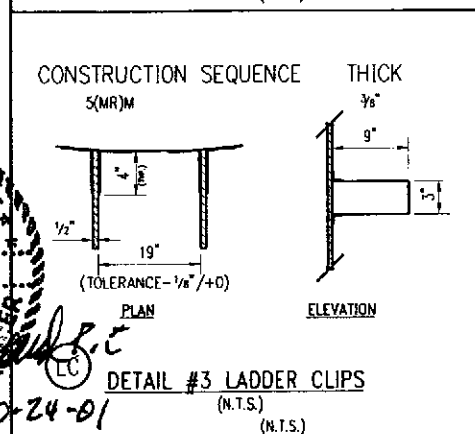
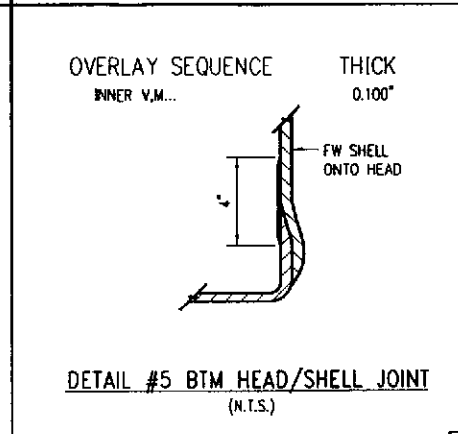
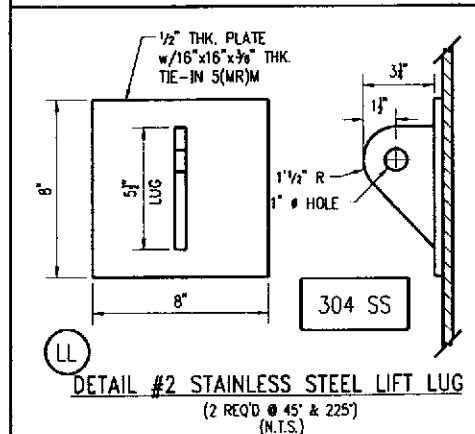
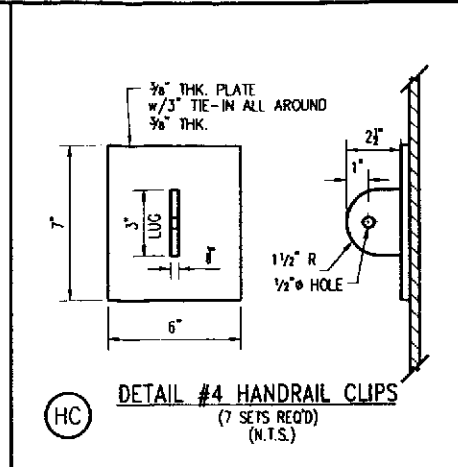
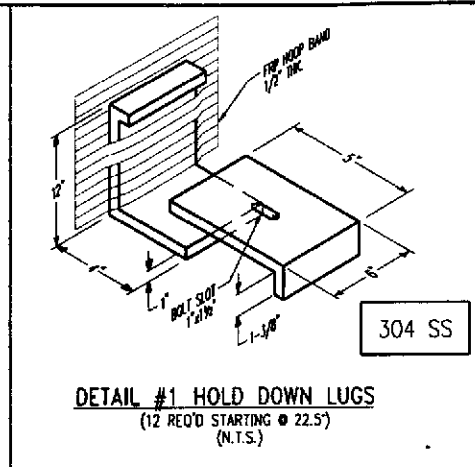
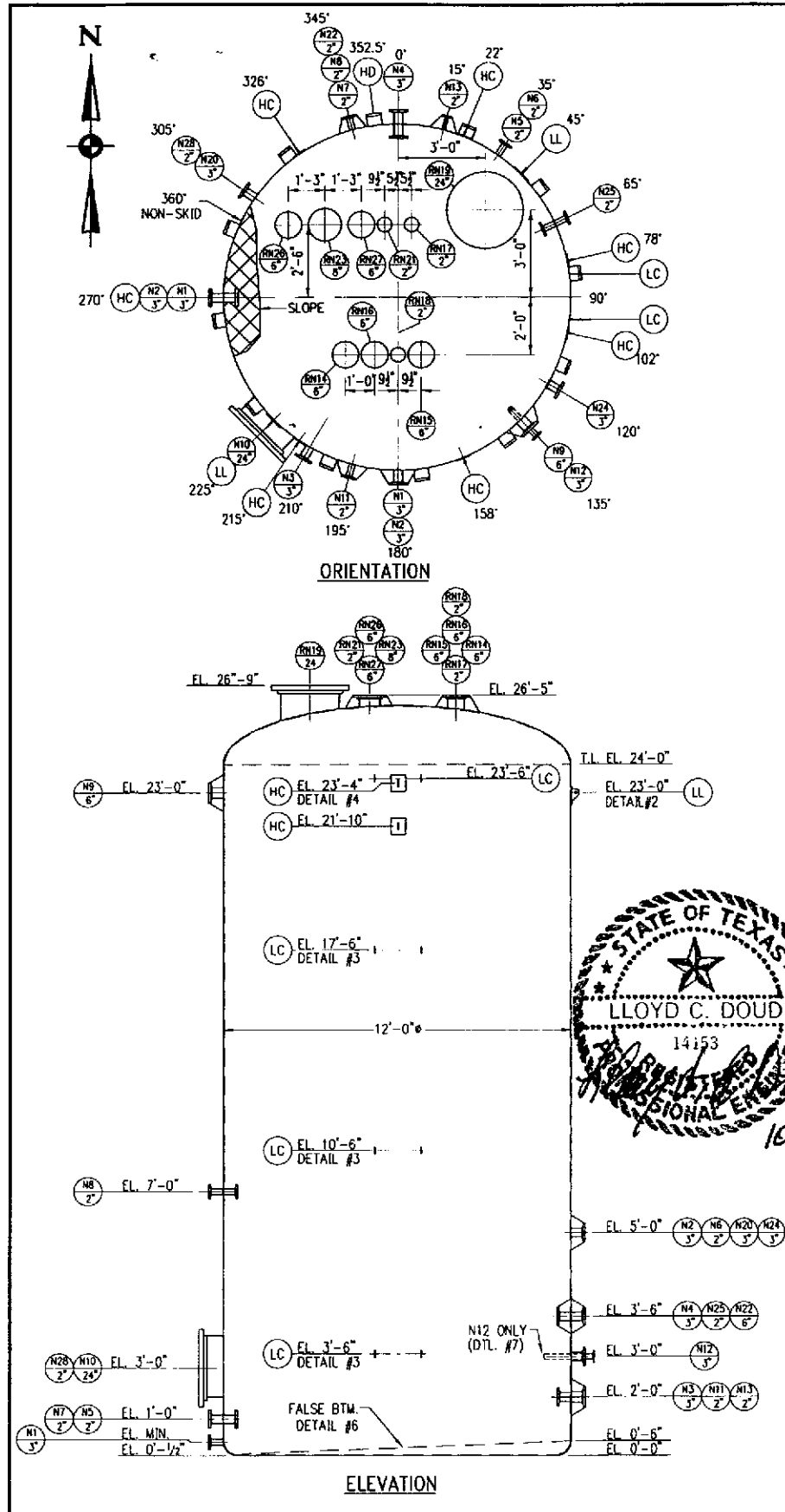
2759 Battleground Road  
Deer Park, Texas 77536  
(281) 604-6150

ENGINEER: H & M DESIGN, INC.  
8602 SPENCER HWY.  
LA PORTE, TEXAS 77571  
PH: (281) 930-8750  
FAX: (281) 930-8711  
E-MAIL: hnm@hnmdesigninc.com

DRAWN BY: CD DATE: 11/00  
CHECKED BY: PAM SMOLEN  
H&M JOB #: 760-EM

PROJ. ENG.:  
VOPAK ENG.:  
SCALE: NTS  
ENGINEER JOB NO.:

REPORTS FOR RCRA PART "B"			
FABRICATION DETAILS FOR 05-T-575			
EMULSIFIED OIL TANK SYSTEM			
NOR #82			
Shi. size:	ACad File Name:	Drawing Number:	Rev.
D	5-60-T-575-1-REV1.DWG	05-60-T-575-1	1



VESSEL DATE OF ORDER YEAR BUILT

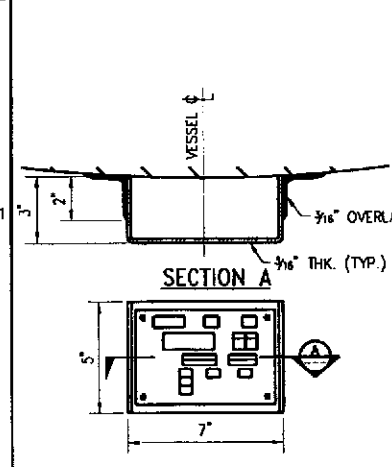
MFG. OF EQUIP. DESIGN OF PRESS. TEMP.

ORDER NO. EQUIP. NO.

SHELL 0'-7' TOP HEAD BOTTOM HEAD

SHELL 7'-15'

SHELL 15'-24'



GENERAL NOTES

1. TANK MANUFACTURER TO PROVIDE PROTECTIVE SHIELDS FOR ALL FLANGES AND OPENINGS.
2. TANK MANUFACTURER SHALL PROVIDE BOLTS AND HEX NUTS FOR ALL MATING PARTS INCLUDING BLIND FLANGES MATING PARTS INCLUDING BLIND FLANGES ONLY WHERE NOTED.
3. APPLICABLE CLIENT STANDARDS AND SPECS.
4. COLOR - NATURAL
5. ALL NOZZLES THROUGH 5" INCLUSIVE RECIEVE BLADE TYPE GUSSETS UNLESS OTHERWISE NOTED.
6. BOLT HOLES TO STRADDLE NAT'L C/L's
7. FLANGES THROUGH 24" DRILLED TO USA STD B16.5 FOR 150 PSI STL FLGS. ABOVE 24" TO B16.1 FOR 125 PSI CI FLGS. UNLESS OTHERWISE NOTED.
8. ALL FRP FLANGES ARE FLAT FACED.

MATERIALS OF CONSTRUCTION	
SHELL	FRP
HEADS	FRP
FLANGES	FRP
NOZZLE NECKS	FRP
VESSEL SUPPORTS	304 SS
EXT. BOLTS/NUTS	TEFLON COATED C.S.
INT. BOLTS/NUTS	N/A
GASKETS	VITON
CATALYST SYSTEMS	
LINER	FRP
STRUCTURAL	FRP
DESIGN CONDITIONS	
DESIGN PRESS.	2" H <sub>2</sub> O
DESIGN TEMP	250° F
OPERATING PRESS.	-----
OPERATING TEMP.	-----
CORR. ALLOW.	0.100
CODE	ASTM D-3299
HYDRO TEST.	WATER
SP. GR. CONTENTS	1.1
WIND	100 MPH
SEISMIC	0
CAPACITIES AND WEIGHTS	
OPERATING CAP	20,305 GAL
FULL CAPACITY	N/A
EMPTY WEIGHT	N/A
OPERATING WEIGHT	N/A

MARK #	REQ'D NO.	NOZ. I.D. (d)	RATING (PSIG)	NECK THK. (in)	FLG. THK. (tr)	FLG. O.D. (D)	QTY. BOLT.	DIA BOLT.	DIA HOLE	DIA SPOT	BOLT CIRCLE (BC)	NOZ. PROJ. (PROJ)	BOLTS by WFR.	REINF. THK. (tr)	REINF. DIA. (dr)	OUT. THK. (to)	UO1. HIGH (ho)	IN. THK. (ti)	IN. HIGH (H)	R. HAD. (r)	REMARKS
N1	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 1/4	6	6	NO	1/4	9	1/2	4	0.100	4	3/8	LOW PUMP SUCTION W/INT. FLANGE
N2	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 1/4	6	6	NO	1/4	9	1/2	4	0.100	4	3/8	HIGH PUMP SUCTION
N3	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 1/4	6	6	NO	1/4	9	1/2	4	0.100	4	3/8	TRUCK LINE INLET
N4	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 1/4	6	6	NO	1/4	9	1/2	4	0.100	4	3/8	RE-CIRCULATION W/INT. FLANGE
N5	1	2	150	1/4	1	6	4	3/8	3/4	1 1/4	4 3/4	6	NO	3/8	8	1/2	4	0.100	4	3/8	PEROXIDE INLET
N6	1	2	150	1/4	1	6	4	3/8	3/4	1 1/4	4 3/4	6	NO	3/8	8	1/2	4	0.100	4	3/8	SAMPLE PT
N7	1	2	150	1/4	1	4 3/8	4	1/2	3/8	1 3/8	3 3/8	6	NO	0	7	1/2	4	0.100	4	3/8	TEMPERATURE INDICATOR
N8	1	2	150	1/4	1	4 3/8	4	1/2	3/8	1 3/8	3 3/8	6	NO	0	7	1/2	4	0.100	4	3/8	TEMPERATURE INDICATOR
N9	1	6	150	3/8	1 1/8	11	8	3/4	7/8	2	9 1/2	SEE EL	NO	1/2	12	1/4	3	0.100	3	3/8	SPARE
N10	1	24	35	1/2	1 3/8	32	20	1 3/4	1 3/8	3	29 1/2	10	YES	1/2	48	1/2	4	0.100	4	3/8	MANWAY W/ COVER
N11	1	2	150	1/4	1	6	4	3/8	3/4	1 1/4	4 3/4	6	NO	3/8	8	1/2	4	0.100	4	3/8	ACID
N12	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 1/4	6	SEE EL	NO	3/4	9	1/2	4	0.100	4	3/8	STEAM w/2" SS. STUB PIPE
N13	1	2	150	1/4	1	6	4	3/8	3/4	1 1/4	4 3/4	6	NO	3/8	8	1/2	4	0.100	4	3/8	N <sub>2</sub> W/INT. FLANGE
RN14	1	6	150	3/8	1 1/8	11	8	3/4	7/8	2	9 1/2	SEE EL	NO	1/2	12	1/4	3	0.100	3	3/8	P/V VENT
RN15	1	6	150	3/8	1 1/8	11	8	3/4	7/8	2	9 1/2	SEE EL	NO	1/2	12	1/4	3	0.100	3	3/8	VAPOR VENT
RN16	1	6	150	3/8	1 1/8	11	8	3/4	7/8	2	9 1/2	SEE EL	NO	1/2	12	1/4	3	0.100	3	3/8	LEVEL
RN17	1	2	150	1/4	1	6	4	3/8	3/4	1 1/4	4 3/4	6	NO	3/8	8	1/2	4	0.100	4	3/8	NITROGEN
RN18	1	2	150	1/4	1	6	4	3/8	3/4	1 1/4	4 3/4	6	NO	3/8	8	1/2	4	0.100	4	3/8	HIGH LEVEL ALARM
RN19	1	24	35	1/2	1 3/8	32	20	1 3/4	1 3/8	3	29 1/2	10	YES	1/2	48	1/2	4	0.100	4	3/8	NW w/EMERGENCY VENT
N20	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 1/4	6	SEE EL	NO	3/4	9	1/2	4	0.100	4	3/8	LOW PH TRUCK
RN21	1	2	150	1/4	1	4 3/8	4	1/2	3/8	1 3/8	3 3/8	SEE EL	NO	0	7	1/2	4	0.100	4	3/8	NO <sub>2</sub>
N22	1	6	150	3/8	1 1/8	11	8	3/4	7/8	2	9 1/2	SEE EL	NO	1/2	12	1/4	3	0.100	3	3/8	INLET FROM F-4,F-5, T-591
RN23	1	8	150	3/8	1 1/8	13 1/2	8	3/4	7/8	2	11 3/4	SEE EL	NO	1/2	14	1/4	3	0.100	3	3/8	GAGE HATCH
N24	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 1/4	6	6	NO	1/4	9	1/2	4	0.100	4	3/8	SPARE
N25	1	2	150	1/4	1	4 3/8	4	1/2	3/8	1 3/8	3 3/8	SEE EL	NO	0	7	1/2	4	0.100	4	3/8	TEMPERATURE INDICATOR
RN26	1	6	150	3/8	1 1/8	11	8	3/4	7/8	2	9 1/2	SEE EL	NO	1/2	12	1/4	3	0.100	3	3/8	SPARE
RN27	1	6	150	3/8	1 1/8	11	8	3/4	7/8	2	9 1/2	SEE EL	NO	1/2	12	1/4	3	0.100	3	3/8	SPARE
N28	1	2	150	1/4	1	4 3/8	4	1/2	3/8	1 3/8	3 3/8	SEE EL	NO	0	7	1/2	4	0.100	4	3/8	FROM DRUM PAD
																	</				

NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	DRAWING NUMBER	REFERENCE DRAWINGS
A	ISSUE FOR REVIEW	10/00	AG						
O	ISSUE FOR CONSTRUCTION	02/01	AG						

**Vopak INDUSTRIAL SERVICES**

2759 Bottleground Road  
Deer Park, Texas 77536  
(281) 604-6150

ENGINEER **H&M DESIGN INC.**  
H & M DESIGN, INC.  
8602 SPENCER HWY.  
LA PORTE, TEXAS 77571  
PH / (281) 930-8750  
FAX / (281) 930-8711  
E-MAIL hnm@hndesigninc.com

DRAWN BY: AG DATE 11/00  
CHECKED BY: PAM SMOLEN  
H&M JOB #: 760-EM

PROJ. ENG.:  
VOPAK ENG.:  
SCALE: NTS  
ENGINEER JOB NO.: -PD

**REPORTS FOR RCRA PART "B"**

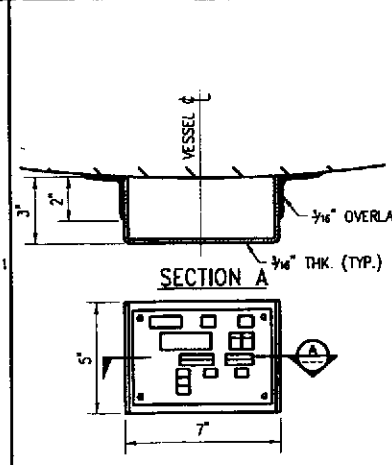
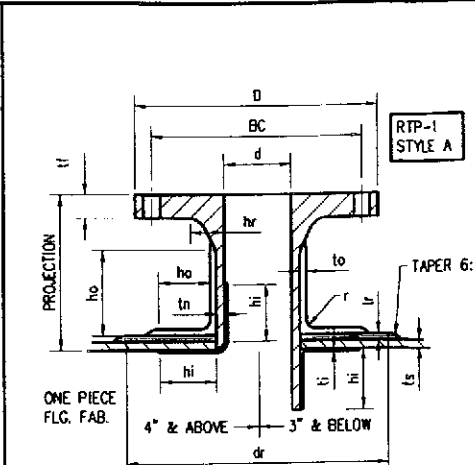
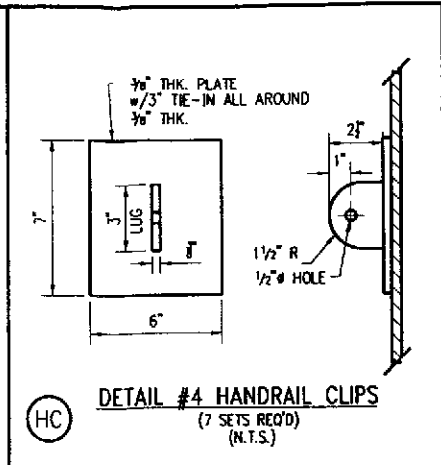
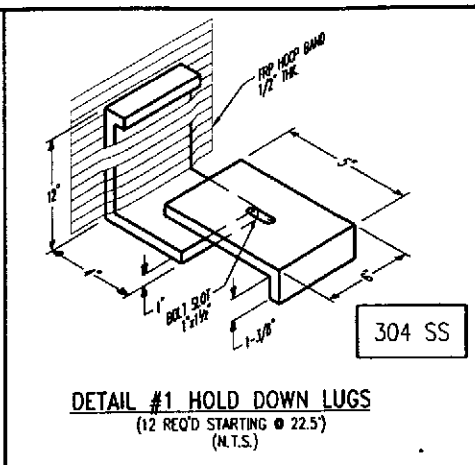
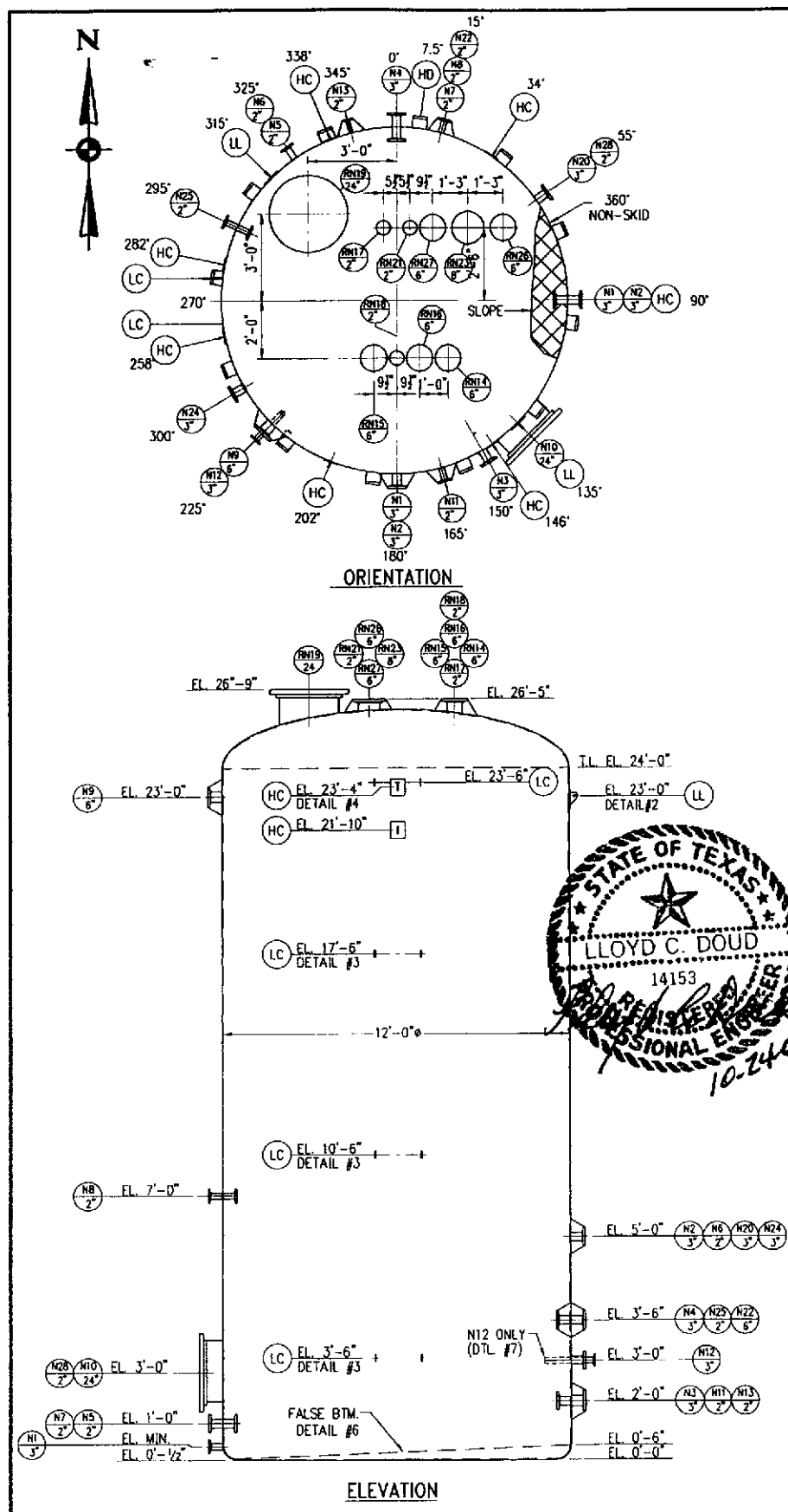
**FABRICATION DETAILS FOR 05-T-40**

**EOTS**

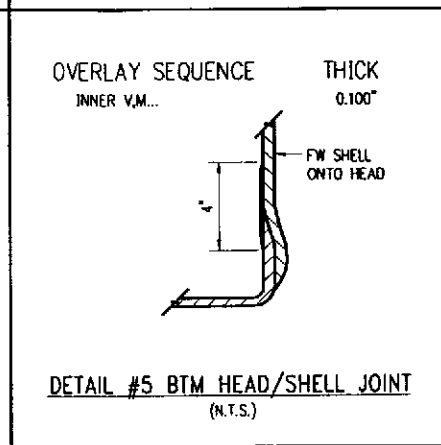
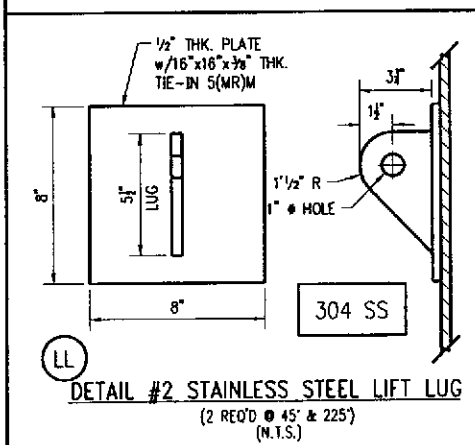
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MATERIALS OF CONSTRUCTION	
SHELL	FRP
HEADS	FRP
FLANGES	FRP
NOZZLE NECKS	FRP
VESEL SUPPORTS	TEFLON COATED C.S.
EXT. BOLTS/NUTS	304 SS
INT. BOLTS/NUTS	N/A
GASKETS	VTN
CATALYST SYSTEMS	
LINER	FRP
STRUCTURAL	FRP
DESIGN CONDITIONS	
DESIGN PRESS.	2" H <sub>2</sub> O
DESIGN TEMP.	250° F
OPERATING PRESS.	-----
OPERATING TEMP.	-----
CORR. ALLOW.	0.100
CODE	ASTM D-3299
HYDRO TEST.	WATER
SP. GR. CONTENTS	1.1
WIND	100 MPH
SEISMIC	0
CAPACITIES AND WEIGHTS	
OPERATING CAP	20,305 GAL.
FULL CAPACITY	-----
EMPTY WEIGHT	-----
OPERATING WEIGHT	N/A



**VESEL** DATE OF ORDER  YEAR BUILT

MFG. OF EQUIP.  DESIGN OF PSIG & F

ORDER NO.  PRESS. TEMP.

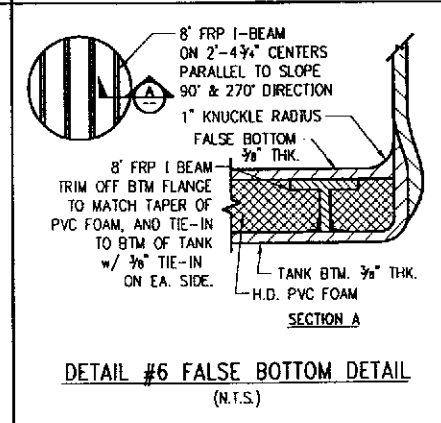
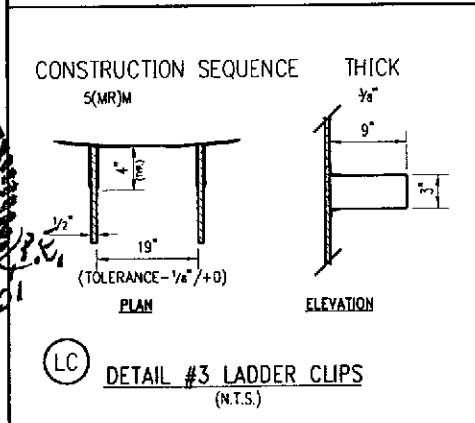
EQUIP. NO.

SHELL 0'-7' ☐ TOP HEAD ☐ BOTTOM HEAD ☐

SHELL 7'-15' ☐

SHELL 15'-24' ☐

- GENERAL NOTES**
- TANK MANUFACTURER TO PROVIDE PROTECTIVE SHIELDS FOR ALL FLANGES AND OPENINGS.
  - TANK MANUFACTURER SHALL PROVIDE BOLTS AND HEX NUTS FOR ALL MATING PARTS INCLUDING BLIND FLANGES MATING PARTS INCLUDING BLIND FLANGES ONLY WHERE NOTED.
  - APPLICABLE CLIENT STANDARDS AND SPECS.
  - COLOR - NATURAL
  - ALL NOZZLES THROUGH 5" INCLUSIVE RECEIVE BLADE TYPE GUSSETS UNLESS OTHERWISE NOTED.
  - BOLT HOLES TO STRADDLE NAT'L C/L's.
  - FLANGES THRU 24" DRILLED TO USA STD B16.5 FOR 150 PSI STL FLGS. ABOVE 24" TO B16.1 FOR 125 PSI CI FLGS. UNLESS OTHERWISE NOTED.
  - ALL FRP FLANGES ARE FLAT FACED.



MARK	REQ'D NO.	NOZ. I.D. (d)	RATING (PSIG)	NECK THK. (t)	FLG. THK. (t)	FLG. O.D. (D)	QTY. BOLTS	DIA. BOLTS	DIA. HOLE	DIA. SPOT	BOLT CIRCLE (BC)	NOZ. PROJ. (PROJ)	BOLTS BY MFR. (tr)	REINF. THK. (t)	REINF. DIA. (dr)	OUT. THK. (to)	OUT. HIGH (ho)	IN. THK. (ti)	IN. HIGH (hi)	R. RAD. (r)	REMARKS
N1	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 1/2	6	6	NO	1/4	9	1/2	4	0.100	4	3/8	LOW PUMP SUCTION W/INT. FLANGE
N2	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 1/2	6	6	NO	1/4	9	1/2	4	0.100	4	3/8	HIGH PUMP SUCTION
N3	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 1/2	6	6	NO	1/4	9	1/2	4	0.100	4	3/8	TRUCK LINE INLET
N4	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 1/2	6	6	NO	1/4	9	1/2	4	0.100	4	3/8	RE-CIRCULATION W/INT. FLANGE
N5	1	2	150	1/4	1	6	4	3/8	3/4	1 1/2	4 1/2	6	NO	3/16	8	1/2	4	0.100	4	3/8	PEROXIDE INLET
N6	1	2	150	1/4	1	6	4	3/8	3/4	1 1/2	4 1/2	6	NO	3/16	8	1/2	4	0.100	4	3/8	SAMPLE PT
N7	1	2	150	1/4	1	4 1/2	4	1/2	3/8	1 1/8	3 1/8	6	NO	0	7	1/2	4	0.100	4	3/8	TEMPERATURE INDICATOR
N8	1	2	150	1/4	1	4 1/2	4	1/2	3/8	1 1/8	3 1/8	6	NO	0	7	1/2	4	0.100	4	3/8	TEMPERATURE INDICATOR
N9	1	6	150	3/8	1 1/8	11	8	3/4	7/8	2	9 1/2	10	YES	1/2	48	1/2	4	0.100	4	3/8	SPARE
N10	1	24	35	1/2	1 1/8	32	20	1 1/4	1 1/8	3	29 1/2	10	YES	1/2	48	1/2	4	0.100	4	3/8	MANWAY W/ COVER
N11	1	2	150	1/4	1	6	4	3/8	3/4	1 1/2	4 1/2	6	NO	3/16	8	1/2	4	0.100	4	3/8	ACID
N12	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 1/2	6	SEE EL	NO	1/4	9	1/2	4	0.100	4	3/8	STEAM w/2" SS. STUB PIPE
N13	1	2	150	1/4	1	6	4	3/8	3/4	1 1/2	4 1/2	6	NO	3/16	8	1/2	4	0.100	4	3/8	N <sub>2</sub> W/INT. FLANGE
RN14	1	6	150	3/8	1 1/8	11	8	3/4	7/8	2	9 1/2	SEE EL	NO	1/2	12	1/4	3	0.100	3	3/8	P/V VENT
RN15	1	6	150	3/8	1 1/8	11	8	3/4	7/8	2	9 1/2	SEE EL	NO	1/2	12	1/4	3	0.100	3	3/8	VAPOR VENT
RN16	1	6	150	3/8	1 1/8	11	8	3/4	7/8	2	9 1/2	SEE EL	NO	1/2	12	1/4	3	0.100	3	3/8	LEVEL
RN17	1	2	150	1/4	1	6	4	3/8	3/4	1 1/2	4 1/2	6	NO	3/16	8	1/2	4	0.100	4	3/8	NITROGEN
RN18	1	2	150	1/4	1	6	4	3/8	3/4	1 1/2	4 1/2	6	NO	3/16	8	1/2	4	0.100	4	3/8	HIGH LEVEL ALARM
RN19	1	24	35	1/2	1 1/8	32	20	1 1/4	1 1/8	3	29 1/2	10	YES	1/2	48	1/2	4	0.100	4	3/8	WW w/EMERGENCY VENT
N20	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 1/2	6	SEE EL	NO	1/4	9	1/2	4	0.100	4	3/8	LOW PH TRUCK
RN21	1	2	150	1/4	1	4 1/2	4	1/2	3/8	1 1/8	3 1/8	6	NO	0	7	1/2	4	0.100	4	3/8	NOCH
N22	1	6	150	3/8	1 1/8	11	8	3/4	7/8	2	9 1/2	SEE EL	NO	1/2	12	1/4	3	0.100	3	3/8	INLET FROM F-4,F-5, T-591
RN23	1	8	150	3/8	1 1/8	13 1/2	8	3/4	7/8	2	11 3/4	SEE EL	NO	1/2	14	1/4	3	0.100	3	3/8	GAGE HATCH
N24	1	3	150	1/4	1	7 1/2	4	3/8	3/4	1 1/2	6	6	NO	1/4	9	1/2	4	0.100	4	3/8	SPARE
N25	1	2	150	1/4	1	4 1/2	4	1/2	3/8	1 1/8	3 1/8	6	NO	0	7	1/2	4	0.100	4	3/8	TEMPERATURE INDICATOR
RN26	1	6	150	3/8	1 1/8	11	8	3/4	7/8	2	9 1/2	SEE EL	NO	1/2	12	1/4	3	0.100	3	3/8	SPARE
RN27	1	6	150	3/8	1 1/8	11	8	3/4	7/8	2	9 1/2	SEE EL	NO	1/2	12	1/4	3	0.100	3	3/8	SPARE
N28	1	2	150	1/4	1	4 1/2	4	1/2	3/8	1 1/8	3 1/8	6	NO	0	7	1/2	4	0.100	4	3/8	FROM DRUM PAD

NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	DRAWING NUMBER	REFERENCE DRAWINGS
A	ISSUE FOR REVIEW	10/00	AG						
O	ISSUE FOR CONSTRUCTION	02/01	AG						

**Vopak INDUSTRIAL SERVICES**

2759 Battleground Road  
 Deer Park, Texas 77536  
 (281) 604-6150

ENGINEER **H&M DESIGN INC.** PH # (281) 930-8750  
 8602 SPENCER HWY. FAX # (281) 930-8711  
 LA PORTE, TEXAS 77571 E-MAIL hnm@hmdesigninc.com

DRAWN BY: CD DATE 11/00  
 CHECKED BY: PAM SMOLEN  
 H&M JOB #: 780-EM

PROJ. ENG.:  
 VOPAK ENG.:  
 SCALE: NTS  
 ENGINEER JOB NO.

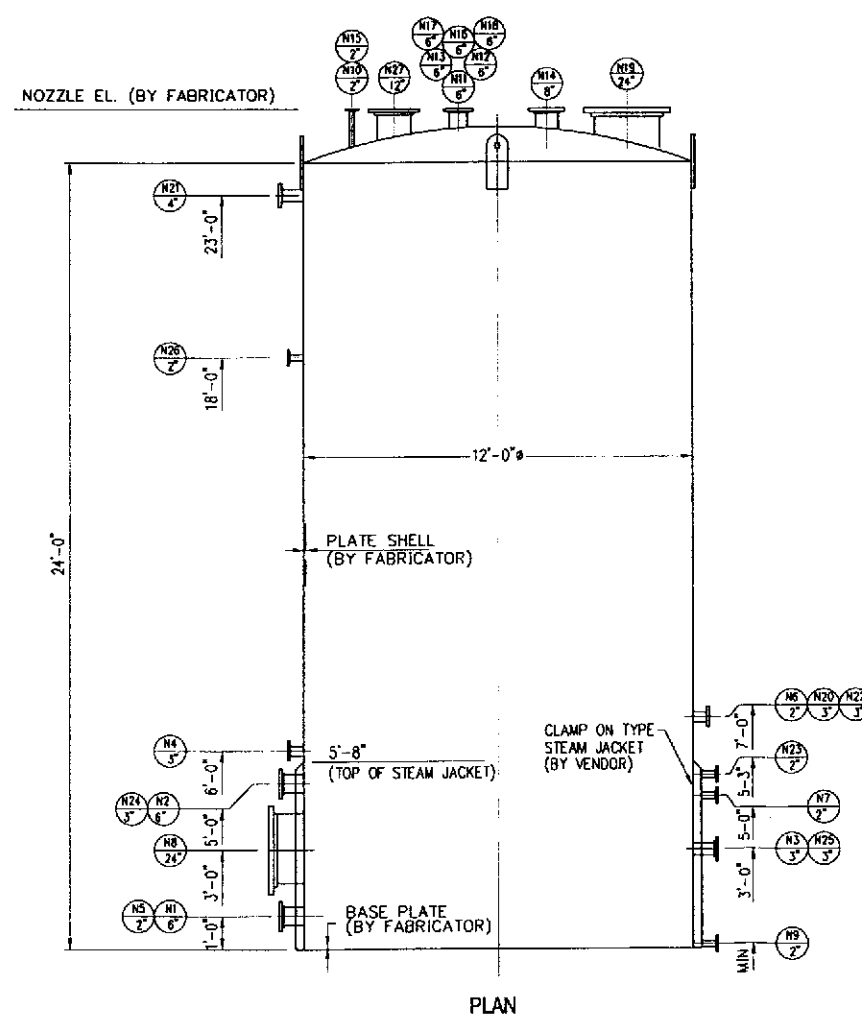
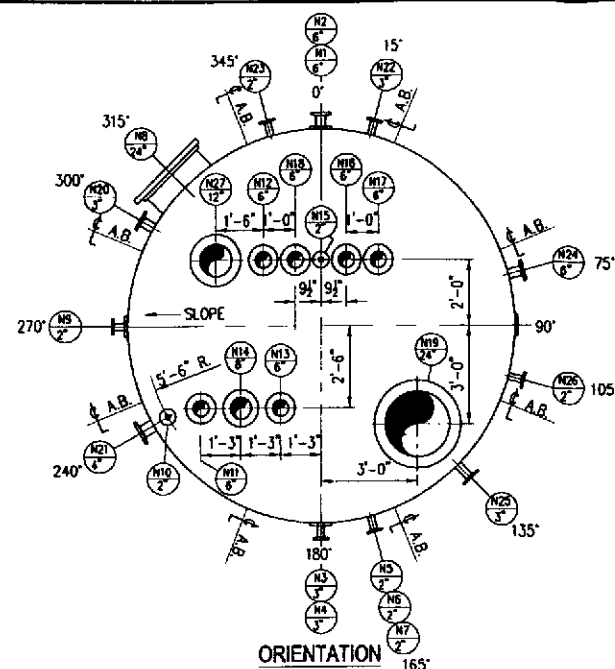
**REPORTS FOR RCRA PART "B"**

**FABRICATION DETAILS FOR 05-T-39**

**EOTS**

NOR #83

Sht. size: D ACad File Name: 05-60-T-39-1.DWG Drawing Number: 05-60-T-39-1 Rev. 0



1. VESSEL TO BE FABRICATED OR PURCHASED USED.  
ANY MODIFICATIONS TO A USED VESSEL TO BE PER  
API-650.


MATERIALS OF CONSTRUCTION		
	VESSEL OR SHELL SIDE	JACKET OR TUBE SIDE
SHELL	SA-240 304L OR EQUAL	.
HEADS	SA-240 304L OR EQUAL	.
FLANGES	SA-182 F304L OR EQUAL	.
NOZZLE NECKS	SA-312 TP304L OR EQUAL	.
VESSEL SUPPORTS	SA-240 GR 304L	.
INTERNAL BOLTS NUTS	SA-193 88W SA-193 88W	.
EXTERNAL BOLTS NUTS	SA-193 87 SA-194 2H	.
GASKETS	.	.

DESIGN CONDITIONS		
DESIGN PRESS.	2.5 PSF	
DESIGN TEMP.	350 F	
OPERATING PRESS.		
OPERATING TEMP.		
CORR. ALLOWED	0	
CODE	API 650, APPENDIX F.M	
CODE STAMP	N/A	
STRESS RELIEF	N/A	
ECHOGRAPH		
JOINT EFF.	.85	
HYDRO TEST	FOR 650	
SP. GR. CONTENTS	1.1	

CAPACITIES AND WEIGHTS	
OPERATING CAP.	20,305 GAL
FULL CAPACITY	
EMPTY WEIGHT	
OPERATING WEIGHT	

NOZZLE SCHEDULE								
MARK	No.	SIZE	RATING	FACING	T"	O.S. PROJ	TYPE	SERVICE
N#1	1	5"	150#	RF50	.280	5"		LOW PUMP SUCTION
N#2	1	5"	150#	RF50	.280	5"		HIGH PUMP SUCTION
N#3	1	5"	150#	RF50	.216	5"		RE-CIRCULATION
N#4	1	5"	150#	RF50	.216	5"		RE-CIRCULATION
N#5	1	2"	150#	RF50	.154	5"		TEMPERATURE INDICATOR
N#6	1	2"	150#	RF50	.154	5"		TEMPERATURE INDICATOR
N#7	1	2"	150#	RF50	.154	5"		TEMPERATURE INDICATOR (JKT)
N#8	1	2 1/2"	150#	RF50	.688	10"		MANWAY W/ COVER
N#9	1	2"	150#	RF50	.154	5"		CONDENSATE (JKT)
N#10	1	2"	150#	RF50	.154	SEE EL		NITROGEN
N#11	1	5"	150#	RF50	.280	SEE EL		P/V VENT
N#12	1	5"	150#	RF50	.280	SEE EL		VAPOR VENT
N#13	1	5"	150#	RF50	.280	SEE EL		LEVEL
N#14	1	5"	150#	RF50	.280	SEE EL		GAGE HATCH
N#15	1	2"	150#	RF50	.154	SEE EL		HIGH LEVEL ALARM
N#16	1	5"	150#	RF50	.280	SEE EL		SPARE
N#17	1	5"	150#	RF50	.280	SEE EL		SPARE
N#18	1	5"	150#	RF50	.280	SEE EL		SPARE
N#19	1	2 1/2"	150#	RF50	.688	SEE EL		MANWAY W/ COVER
N#20	1	5"	150#	RF50	.216	5"		SPARE
N#21	1	4"	150#	RF50	.237	5"		SPARE
N#22	1	5"	150#	RF50	.216	5"		SPARE
N#23	1	2"	150#	RF50	.154	5"		STEAM (JKT)
N#24	1	3"	150#	RF50	.216	5"		SPARE
N#25	1	2"	150#	RF50	.216	5"		MAIN PROCESS HEADR
N#26	1	2"	150#	RF50	.154	5"		TEMPERATURE INDICATOR
N#27	1	1 1/2"	150#	RF50				EMERGENCY VENT

GENERAL NOTES

1. BOLT HOLES TO STRADDLE SHOWN CENTERLINES
2. FABRICATOR TO PROVIDE PROTECTIVE SHIELDS FOR ALL FLANGES AND OPENINGS
3. FABRICATOR SHALL PROVIDE GASKETS, BOLTS AND HEX NUTS FOR ALL MATING PARTS INCLUDING BLIND FLANGES WHERE NOTED.
4. SPARE SET OF GASKETS IS REQUIRED. (TWO SETS)
5. INDICATE MACHINE FINISHED SURFACES IN MICROPHONES WITH ANS SYMBOL.  
e.g.  ETC.
6. INSULATION SUPPORTS (NOT) REQUIRED.
7. SURFACE PREPARATION \_\_\_\_\_
8. PAINTING \_\_\_\_\_
9. APPLICABLE VOPAK STANDARDS AND SPECS. \_\_\_\_\_



10. UNLESS OTHERWISE SHOWN, DIMENSIONS FROM FACE OF FLANGE TO OUTSIDE SURFACE OF SHELL FOR NOZZLES SHALL BE 6" FOR 4" AND SMALLER SIZES, 8" FOR 6" & 8" SIZES, 8" FOR 6" & 8" SIZES, 10" FOR 10" & LARGER SIZES, 8" FOR MAMMOLES & ALL NOZ. NECKS TO BE SCH. 40 PIPE FLG'S SIZES.

VOPAK REFERENCE DATA			
PURCH. ORDER No.		PURCH. ORDER DATE	
ITEM NUMBER	ASSET NUMBER	ITEM NUMBER	ASSET NUMBER

MANUFACTURER DATA			
MFR. NAME: _____			
STREET / P.O. BOX: _____			
CITY: _____		STATE: _____	ZIP: _____
TELEPHONE No.: ( ) _____		FAX No.: ( ) _____	
ENGINEERING CONTACT: _____			
MFR. SERIAL No.: _____		SHOP ORDER No.: _____	
MFR. DWG. No.: _____		REV.: _____	

CEA-00-N/A

[illegible]

 <b>Vopak</b> <b>INDUSTRIAL SERVICES</b>		2759 Battleground Road Deer Park, Texas 77536 (281) 604-8150	
ENGINEER		H & M DESIGN, INC. 8602 SPENCER HWY. LA PORTE, TEXAS 77571	PH # (281) 930-8750 FAX # (281) 930-8711 E-MAIL: hnm@hmsdesigninc.com
DRAWN BY: CJD	DATE 11/00		PROJ. ENG.:
CHECKED BY:			VOPAK ENG.: P. SMOLEN
H&M JOB #: 760-EM			SCALE: NON ENGINEER JOB NO.

REPORTS FOR RCRA PART "B"

FABRICATION DETAILS FOR 05-T-42

## FUELS

NOR#86

Sht. size:	ACad File Name:	Drawing Number:	Rev.
D	05-60-T-42-1-rev0	05-60-T-42-1	0





**APPENDIX V.D**  
**SURFACE IMPOUNDMENTS**  
**(RESERVED)**



**APPENDIX V.E  
WASTE PILES  
(RESERVED)**

**APPENDIX V.F**  
**LAND TREATMENT UNITS**  
**(RESERVED)**

**APPENDIX V.G**  
**LANDFILLS**  
**(RESERVED)**

**APPENDIX V.H  
INCINERATORS  
(RESERVED)**

**APPENDIX V.I**  
**BOILERS AND INDUSTRIAL FURNACES**  
**(RESERVED)**

**APPENDIX V.J**  
**DRIP PADS**  
**(RESERVED)**

**APPENDIX V.K**  
**MISCELLANEOUS UNITS**  
**(RESERVED)**

**APPENDIX V.L  
CONTAINMENT BUILDINGS  
(RESERVED)**



## **SECTION VI – GEOLOGY REPORT**

## 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.

### A. Geology and Topography

RESERVED

### B. Facility Groundwater

RESERVED

### C. Exemption from Groundwater Monitoring for an Entire Facility

RESERVED

### D. Unsaturated Zone Monitoring

RESERVED

## **APPENDIX VI**

### **GEOLOGY REPORT**

This section is not applicable since this application is not for a new hazardous waste management facility; areal and/or capacity expansions of the existing hazardous waste management facility; or an existing hazardous waste management facility that stores, processes, or disposes of hazardous wastes in surface impoundments, landfills, land treatment units, waste piles, or tank or drip pads which require a contingent post-closure plan.

## **SECTION VII – CLOSURE AND POST CLOSURE REPORT**

## 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.

### 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.

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).

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.

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 RESERVED**

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.

**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.

2. Complete the following tables, as applicable:

a. [Complete Table VII.G - Post Closure Period.](#)

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.

c. [Table V.G.3.](#) - Landfill Liner System and specify the type of liner used for the landfill.

d. [Table V.G.4.](#) - Landfill Leachate Collection System used for the landfill.

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.

f. [Table V.E. 3](#) - Waste Pile Liner System and specify the type of containment/liner system.

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.

h. [Table V.D. 6.](#) - Surface Impoundment Liner System for each surface impoundment to be permitted.

i. [Table V.C.](#) Tanks and Tank Systems.

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).
2. The name, address, and phone number of the person or office to contact about the disposal facility during the post-closure period; and
3. A discussion of the future use of the land associated with each unit.
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).
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.

D. Post-closure Cost Estimate [40 CFR 264.144] RESERVED

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.

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.
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

## **APPENDIX VII CLOSURE PLAN**



## **CLOSURE AND POST CLOSURE REPORT PART B – SECTION VII**

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
PERMIT RENEWAL APPLICATION FOR A HAZARDOUS WASTE  
STORAGE, PROCESSING, AND DISPOSAL FACILITY**

**HAZARDOUS WASTE PERMIT NO. 50025**

**DATE: SEPTEMBER 6, 2024**



**PREPARED FOR:**

**VOPAK LOGISTICS SERVICES USA, INC.  
VOPAK LOGISTICS SERVICES USA DEER PARK  
2759 INDEPENDENCE PARKWAY SOUTH  
DEER PARK, TEXAS 77536**

**PREPARED BY:**

**ENGICON ENVIRONMENTAL, LLC.  
1717 WEST 34<sup>TH</sup> STREET, SUITE 600 # 120  
HOUSTON, TEXAS, 77018**

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## 1.0 INTRODUCTION

The Closure Plan is prepared for the Vopak Logistics Services USA Deer Park facility located at 2759 Independence Parkway South, Deer Park, Texas 77536 (hereafter referred to as VLS or the facility). The Closure Plan has been prepared to identify the procedures required to close the hazardous waste management facility, and to comply with the hazardous waste permit in accordance with Title 40 of the Code of Federal Regulations (CFR) Part 264 Subpart G (40 CFR §264.110-115 – Closure and Post Closure) and Title 30 of the Texas Administrative Code (TAC) Chapter 335 (30 TAC §335.8 – Closure and Remediation).

### 1.1 Basis

In addition, the Closure Plan has been prepared in accordance with the requirements of:

- 40 CFR §264.112 – Closure Plan; Amendment of Plan
- 40 CFR §264.142 – Cost Estimate for Closure.
- 40 CFR §264.178 – Subpart I Containers: Closure.
- 40 CFR §264.197 – Subpart J, Tanks: Closure
- 40 CFR §270.14(b)(13) – Contents of Part B.
- 30 TAC §335.177 – General Performance Standards.
- 30 TAC §335.178 – Cost Estimate for Closure
- 30 TAC §350 – Risk Reduction Program Rule.

### 1.2 Purpose and Approach

The objective of the Closure Plan is to remove all waste and waste residues from the hazardous waste management units and associated ancillary equipment and components in order to:

- Minimize the need for further maintenance; and
- Control, minimize or eliminate the potential of hazardous waste releases to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere.

Note that individual hazardous waste management unit closures may occur during the permitted period and such closures are not subject to the final closure requirements, unless the facility is in final closure. Such closure may occur at any time and performed according to the Closure Plan and other permit requirements.

For the purposes of this section, “Final Closure” means closure of the hazardous waste management facility including all permitted units and associated ancillary equipment and components so that hazardous waste management activities are no longer conducted at the facility. Final facility closure is not expected prior to 2050 and will be performed according to the Closure Plan and other permit requirements as applicable.

## **2.0 GENERAL INFORMATION**

Vopak Logistics Services USA, Inc. operates a hazardous and industrial solid waste storage, treatment and disposal facility. The facility is permitted to receive hazardous waste in containers, tank trucks, and railcars. The facility consists of two container storage areas, and 49 tanks and tanks systems located within secondary containment areas designed to contain spills or leaks, precipitation and prevent run-on.

The Closure Plan has been prepared based on the two container storage areas, and the seven secondary containment areas used to contain the tanks and tank systems as detailed in the engineering report. As such, the Closure Plan has been divided into nine distinct components and the closure of the facility considers the closure of these components as separate and distinct activities, and as detailed below.

### **2.1 Risk Reduction Standards**

In addition to the federal requirements, the facility will be closed in accordance with the Texas Risk Reduction Standards provided in 30 TAC Chapter 335 Subchapter S. The facility will pursue closure and decontamination of the site to background levels in accordance with 30 TAC §335.554. Based on that, the soil media that has become contaminated by releases from a hazardous waste management unit or by other unauthorized discharge of hazardous waste (if any), will be removed or decontaminated to background levels.

### **2.2 Closure Standards**

The closure activities at this facility will be conducted in accordance with the following general standards.

#### **2.2.1 Commencement of Closure**

VLS may initiate partial closure of the facility which will include closure of a single or several waste management units as necessary, as part of the facility operations, and to maintain compliance with the permit.

VLS will provide a written notification to the Texas Commission on Environmental Quality (TCEQ) whenever closure activities begin or are completed, or a change in the proposed closure activities is necessary, and will include the following items:

- The waste management unit(s) to be closed;
- The risk remedy to be attained; and
- The estimated timeframe to complete closure activities.

VLS will provide a written notification of the final facility closure activities at least 45 days prior to initiating the closure activities, and will provide a written certification of the final facility closure activities within 60 days of completion of the closure activities. The certification will be prepared by a registered professional engineer.

#### **2.2.2 Amendment to the Closure Plan**

VLS will prepare and submit a written request for permit amendment or modification whenever there are changes in the facility design or operations, or closure remedy that will affect the Closure Plan, as appropriate.

## **3.0 CLOSURE PROCEDURES**

The Closure Plan assumes that all the stored inventory will either be processed and disposed of onsite as authorized or removed from the site, and that all tanks and associated equipment will be decontaminated. The well will be plugged in accordance with TCEQ requirements described under permit Number WDW157.

### **3.1 Removal and Disposal of Inventory**

#### **3.1.1 Tanks and Tank Systems**

The Closure Plan assumes that each permitted tank and tank system will be full to capacity during closure activities, and that the waste will be drained, collected and disposed of onsite or at an authorized permitted Treatment, Storage and Disposal (TSD) facility in accordance with the applicable federal and state regulations.

#### **3.1.2 Containers**

The Closure Plan assumes that the container storage areas will be full to capacity with hazardous waste containers (e.g., 55-gallon drums or totes or combination of both) that will require onsite or offsite disposal.

#### **3.1.3 Secondary Containment Areas**

The Closure Plan assumes that the secondary containment areas will contain precipitation based on the two wettest consecutive months of the year, that will require onsite or offsite disposal.

### **3.2 Decontamination of Facility**

The waste management units will either be:

- Decontaminated to the appropriate levels as required by the federal and state regulations; or
- Properly disposed of as waste.

#### **3.2.1 Tanks and Tank Systems**

The tanks and tank systems will be washed and rinsed at least three times, and the generated wastewater will be collected and disposed of onsite or offsite at an authorized permitted TSD facility. It is assumed that the decontamination of the tanks and tank systems will generate nearly 10% of the total waste capacity.

#### **3.2.2 Containers**

The containers will be washed and rinsed at least three times, and the generated wastewater will be collected and disposed of onsite or offsite at an authorized permitted TSD facility. It is assumed that the decontamination of the containers will generate approximately 10% of the total container storage capacity.

### **3.2.3 Secondary Containment Areas**

After the tanks and associated ancillary equipment and piping are decontaminated, the secondary containment areas will be pressure-washed and rinsed at least three times. The generated wash water will be collected and disposed of onsite or at an authorized permitted TSD facility. It is assumed that the wash water will generate approximately 0.1 gallons of the total surface area of the secondary containment areas.

### **3.2.4 Soil**

After decontaminating the waste management units, the soil surrounding the secondary containment areas will be evaluated for potential contamination. Soil samples may be collected and analyzed as necessary.

## **3.3 Clean Closure**

Clean closure of the waste management units, including the tanks and tank systems, and secondary containment areas, will be verified through sample collection and analysis of the final rinsate. The analysis will be based on the contents of the waste management units, and as detailed in the Waste Analysis Plan.

In addition, and as a contingent estimate, approximately one foot of soil equal to the total surface area of each secondary containment area will be excavated and disposed of offsite at an authorized permitted TSD facility.



## **4.0 CONTINGENT CLOSURE**

In the event that extensive soil contamination is identified, VLS reserves the right to close the facility as a landfill, and as detailed below:

### **4.1 Tanks and Tank Systems**

The tanks and tank systems that could not be decontaminated or that are not certified as clean, will be dismantled and disposed of at an authorized permitted TSD facility. However, tanks and associated ancillary equipment could be demolished and contained within the landfill unit.

### **4.2 Closure As Landfill**

Areas of contaminated soil may be closed as a landfill pursuant to the applicable federal and state regulations. If soil is excavated and removed offsite, the area will be backfilled to grade and packed prior to capping the area. The clay cap will be installed in compliance with the applicable federal and state regulations.

### **4.3 Closure Certification**

The capped area will be periodically inspected by a registered Professional Engineer in compliance with the applicable federal and state regulations, and to certify closure. Deed recordation will be performed in compliance with the applicable federal and state regulations.

### **4.4 Post-Closure Care**

Upon closure as a landfill, post-closure monitoring and routine inspections will be performed in compliance with the applicable federal and state regulations. Repairs to the cap will be made as necessary to address settling, subsidence or soil erosion. The site will not be used for the period of post-closure monitoring.

The facility contact information during post-closure will be:

Environmental & Quality Manager Gulf Coast

Vopak Logistics Services USA Deer Park

2759 Independence Parkway South

Deer Park, TX77536

Phone Number: (281) 604-6000

## 5.0 CLOSURE SCHEDULE

Final closure of the facility will begin as required in accordance with the federal and state regulations, and the hazardous waste permit. Final closure will include the disposal of all wastes and residues in accordance with the federal and state regulations.

The final closure activities are summarized as follows:

- Notify the appropriate agencies of final closure;
- Begin closure activities;
- Remove and dispose of inventory;
- Decontaminate tanks, ancillary equipment and piping and secondary containment area;
- Verify clean closure;
- As necessary, repeat decontamination process;
- Certify clean closure; and
- Submit clean closure certification report.

## 6.0 CLOSURE COSTS

The assumptions used in the cost calculations are:

- All waste management units have a maximum inventory;
- Use of third-party contractors, consultants and a professional engineer;
- All waste is disposed offsite;
- Soil samples are collected at final closure of containment areas;
- The two wettest consecutive months result in 10.25 inches of precipitation (reference is NOAA)
- Zero salvage value for facility components;
- Cleaning and decontamination time is based on two days per tank; and
- 2023 cost data, except where otherwise noted.

Closure cost calculations for each secondary containment area are provided as part of the permit renewal application. Contingent closure cost calculations are based on the original application (as subsequently modified using inflation factors) and are also provided as part of the permit renewal application.

**TABLE VII.A**  
**UNIT CLOSURE**

For each unit to be permitted, list the facility components to be decontaminated, the possible methods of decontamination, and the possible methods of disposal of wastes and waste residues generated during unit closure:

[illegible]

1. Applicants may list more than one appropriate method.

**TABLE VII.B**  
**UNIT CLOSURE COST ESTIMATE**

**Table VII.B. - Unit Closure Cost Estimate**

Task: Closure of 05-F-04 Area	Cost
05-F-04	
Estimated Costs Associated with Removal and Waste Disposal Activities	\$11,093
Estimated Costs Associated with the Tanks, Ancillary Equipment, and Secondary Containment Cleanup Activities	\$24,500
Estimated Costs Associated with Site Cleanup	\$28,631
Estimated Costs Associated with General Administration of Closure	\$7,500
Subtotal	\$71,724
Engineering and Consulting Services (20%)	\$14,345
Contingency (10% minimum)	\$7,172
Total Closure Cost Year: 2023	\$93,241

Task: Closure of 500 Tank Series Storage Area	Cost
05-T-6, 05-T-7, 05-T-563, 05-T-567, 05-T-583, 05-T-589, 05-T-590, 05-T-591	
Estimated Costs Associated with Removal and Waste Disposal Activities	\$1,608,254
Estimated Costs Associated with the Tanks, Ancillary Equipment, and Secondary Containment Cleanup Activities	\$181,254
Estimated Costs Associated with Site Cleanup	\$462,160
Estimated Costs Associated with General Administration of Closure	\$7,500
Subtotal	\$2,259,167
Engineering and Consulting Services (20%)	\$451,833
Contingency (10% minimum)	\$225,917
Total Closure Cost Year: 2023	\$2,936,918

**Table VII.B. - Unit Closure Cost Estimate**

Task: Closure of Deepwell Injection Area	Cost
05-T-1B, 05-T-43, 05-T-44, 05-T-3, 05-T-4B, 05-T-5, 05-T-8, 05-T-9A, 05-T-9B, 05-C-1, 05-C-2, 05-C-3, 05-C-4, 05-F-1A, 05-F-1B, 05-F-2, 05-F-3, 05-V-2, 05-T-48 and 05-T-49. NOT BUILT YET TANKS: 05-T-23, 05-T-24, and 05-T-25.	
Estimated Costs Associated with Removal and Waste Disposal Activities	\$407,529
Estimated Costs Associated with the Tanks, Ancillary Equipment, and Secondary Containment Cleanup Activities	\$72,131
Estimated Costs Associated with Site Cleanup	\$104,970
Estimated Costs Associated with General Administration of Closure	\$7,500
Subtotal	\$592,131
Engineering and Consulting Services (20%)	\$118,426
Contingency (10% minimum)	\$59,213
Total Closure Cost	Year: 2023 \$769,770

Task: Closure of Emulsified Oil Treatment System (EOTS): Existing	Cost
05-T-4D, 04-T-4E, 05-T-21 and 05-T-22.	
Estimated Costs Associated with Removal and Waste Disposal Activities	\$50,478
Estimated Costs Associated with the Tanks, Ancillary Equipment, and Secondary Containment Cleanup Activities	\$26,297
Estimated Costs Associated with Site Cleanup	\$60,460
Estimated Costs Associated with General Administration of Closure	\$7,500
Subtotal	\$144,736
Engineering and Consulting Services (20%)	\$28,947
Contingency (10% minimum)	\$14,474
Total Closure Cost	Year: 2023 \$188,156



**Table VII.B. - Unit Closure Cost Estimate**

Task: Closure of Emulsified Oil Treatment System (EOTS): Not Yet Built (Used in Total Closure Cost Estimate)	Cost
05-T-21, and 05-T-22. NOT BUILT YET TANKS: 05-T-39, 05-T-40, 05-T-41 and 05-T-42.	
Estimated Costs Associated with Removal and Waste Disposal Activities	\$97,259
Estimated Costs Associated with the Tanks, Ancillary Equipment, and Secondary Containment Cleanup Activities	\$30,975
Estimated Costs Associated with Site Cleanup	\$60,460
Estimated Costs Associated with General Administration of Closure	\$7,500
Subtotal	\$196,194
Engineering and Consulting Services (20%)	\$39,239
Contingency (10% minimum)	\$19,619
Total Closure Cost Year: 2023	\$255,052

Task: Closure of Heel Tank Area	Cost
05-T-51, 05-T-52, 05-T-53, 05-T-54 and 05-T-55	
Estimated Costs Associated with Removal and Waste Disposal Activities	\$54,044
Estimated Costs Associated with the Tanks, Ancillary Equipment, and Secondary Containment Cleanup Activities	\$25,231
Estimated Costs Associated with Site Cleanup	\$58,570
Estimated Costs Associated with General Administration of Closure	\$7,500
Subtotal	\$145, 346
Engineering and Consulting Services (20%)	\$29,069
Contingency (10% minimum)	\$14,535
Total Closure Cost Year: 2023	187,648

**Table VII.B. - Unit Closure Cost Estimate**

Task: Closure of Truck Unloading Area	Cost
05-B-1 and 05-B-2	
Estimated Costs Associated with Removal and Waste Disposal Activities	\$30,123
Estimated Costs Associated with the Tanks, Ancillary Equipment, and Secondary Containment Cleanup Activities	\$19,109
Estimated Costs Associated with Site Cleanup	\$29,163
Estimated Costs Associated with General Administration of Closure	\$7,500
Subtotal	\$85,895
Engineering and Consulting Services (20%)	\$17,179
Contingency (10% minimum)	\$8,590
Total Closure Cost Year: 2023	\$111,664

Task: Closure of Wastewater Emulsified Oil Treatment System (WW EOTS)	Cost
05-T-574 and 05-T-575.	
Estimated Costs Associated with Removal and Waste Disposal Activities	\$35,042
Estimated Costs Associated with the Tanks, Ancillary Equipment, and Secondary Containment Cleanup Activities	\$24,166
Estimated Costs Associated with Site Cleanup	\$36,780
Estimated Costs Associated with General Administration of Closure	\$7,500
Subtotal	\$103,488
Engineering and Consulting Services (20%)	\$20,698
Contingency (10% minimum)	\$10,349
Total Closure Cost Year: 2023	\$134,535

**Table VII.B. - Unit Closure Cost Estimate**

Task: Closure of CSA 05-D-1: Existing	Cost
05-D-1	
Estimated Costs Associated with Removal and Waste Disposal Activities	\$66,582
Estimated Costs Associated with the Tanks, Ancillary Equipment, and Secondary Containment Cleanup Activities	\$14,079
Estimated Costs Associated with Site Cleanup	\$54,410
Estimated Costs Associated with General Administration of Closure	\$7,500
Subtotal	\$142,571
Engineering and Consulting Services (20%)	\$28,514
Contingency (10% minimum)	\$14,257
Total Closure Cost Year: 2023	\$185,342

Task: Closure of CSA 05-D-1: Not Yet Built (Used in Total Closure Cost Estimate)	Cost
05-D-1	
Estimated Costs Associated with Removal and Waste Disposal Activities	\$112,661
Estimated Costs Associated with the Tanks, Ancillary Equipment, and Secondary Containment Cleanup Activities	\$14,171
Estimated Costs Associated with Site Cleanup	\$56,460
Estimated Costs Associated with General Administration of Closure	\$7,500
Subtotal	\$190,792
Engineering and Consulting Services (20%)	\$38,158
Contingency (10% minimum)	\$19,079
Total Closure Cost Year: 2023	\$248,030

**Table VII.B. - Unit Closure Cost Estimate**

Task: Closure of CSA 05-D-3	Cost
05-D-3	
Estimated Costs Associated with Removal and Waste Disposal Activities	\$51,411
Estimated Costs Associated with the Tanks, Ancillary Equipment, and Secondary Containment Cleanup Activities	\$14,109
Estimated Costs Associated with Site Cleanup	\$64,390
Estimated Costs Associated with General Administration of Closure	\$7,500
Subtotal	\$137,410
Engineering and Consulting Services (20%)	\$27,482
Contingency (10% minimum)	\$13,741
Total Closure Cost	Year: 2023 \$178,633

	Cost
Total Closure Cost	Year: 2023

**TABLE VII.D**  
**UNIT POST CLOSURE COST ESTIMATE**

**Table VII.D. - Unit Post-Closure Cost Estimate**

Task: Emulsified Waste Oil Treatment Facility	Cost
Emulsified Waste Oil Treatment Facility	
Tank/Equipment Demo	\$7,990
Concrete Demo	\$5,540
Clay Cover	\$2,200
Drainage Sand	\$24
Filtered Geotextile	\$1,650
Top Soil	\$747
Vegetative Cover	\$5
Administrative and PE Certification	\$1,000
Subtotal	\$19,160
Contingency (10% minimum)	\$1,916
Year(s) of Post-Closure	1
Total Unit Closure Cost (Annual Cost X Years of Post-Closure)	Year 1991 \$21,076

**Note: Contingent Closure Cost Estimate Not Post Closure Cost Estimate.**

The estimates listed above were derived from the following sources: Historical Application

**Table VII.D. - Unit Post-Closure Cost Estimate**

Task: Deepwell Process Tank Area	Cost
Deepwell Process Tank Area	
Tank/Equipment Demo	\$26,820
Concrete Demo	\$23,205
Clay Cover	\$8,975
Drainage Sand	\$100
Filtered Geotextile	\$6,733
Top Soil	\$3,067
Vegetative Cover	\$32
Administrative and PE Certification	\$1,000
Subtotal	\$69,932
Contingency (10% minimum)	\$6,993
Year(s) of Post-Closure	1
Total Unit Closure Cost (Annual Cost X Years of Post-Closure)	Year 1991 \$76,925

**Note: Contingent Closure Cost Estimate Not Post Closure Cost Estimate.**

The estimates listed above were derived from the following sources: Historical Application

**Table VII.D. - Unit Post-Closure Cost Estimate**

Task: Groundwater Monitoring	Cost
Groundwater Monitoring	
Installation	\$42,000
Monitoring and Maintenance	\$4,200
Labor	\$420
Administration	\$480
Mowing, Repairs, Etc./Yr.	\$168,000
Subtotal	\$215,100
Contingency (10% minimum)	\$21,510
Year(s) of Post-Closure	30
Total Unit Closure Cost (Annual Cost X Years of Post-Closure)	Year 1991 \$236,610

**Note: Contingent Closure Cost Estimate Not Post Closure Cost Estimate.**

The estimates listed above were derived from the following sources: Historical Application

<b>Total Permitted Facility Post-Closure Cost (<i>all unit costs combined</i>)</b>	<b>\$334,611 (1991)</b>
<b>Total Permitted Facility Post-Closure Cost (<i>all unit costs combined</i>)</b>	<b>\$551,258 (2013)</b>
<b>Total Permitted Facility Post-Closure Cost (<i>all unit costs combined</i>)</b>	<b>\$725,751 (2024)</b>



**APPENDIX VII.E.1**  
**PERMITTED UNIT CLOSURE COST SUMMARY**

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

Existing Unit Closure Cost Estimate		
Unit		Cost
05-F-04 Area		\$93,241
500 Tank Series Storage Area		\$2,936,918
Deepwell Injection Area		\$769,770
Emulsified Oil Treatment System (EOTS)		\$188,156
Heal Tank Area		\$187,648
Truck Unloading Area		\$111,664
Wastewater Emulsified Oil Treatment System (WW EOTS)		\$134,535
CSA 05-D-1		\$185,342
CSA 05-D-3		\$178,633
Total Existing Unit Closure Cost Estimate <sup>1</sup>	Year 2023	\$4,785,907

Proposed Unit Closure Cost Estimate		
Unit		Cost
Emulsified Oil Treatment System (EOTS)		\$255,052
CSA 05-D-1		\$248,030
Total Proposed Unit Closure Cost Estimate Year 2023		\$4,915,491
Total Proposed Unit Closure Cost Estimate Year 2024		\$5,033,463

**Note: Total Closure Cost Estimate is based on Not Yet Built for EOTS and CSA 05-D-1.**

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 recalculating the revised total cost in current dollars.

**APPENDIX VII.E.2**  
**PERMITTED UNIT POST-CLOSURE COST SUMMARY**

**Table VII.E.2. - Permitted Unit Post-Closure Cost Summary**

Existing Unit Closure Cost Estimate	
Unit	Cost
Emulsified Waste Oil Treatment Facility (2012)	\$34,209
Deepwell Process Tank Area (2012)	\$124,858
Groundwater Monitoring (2012)	\$384,044
Total Permitted Unit Post-Closure Cost 2012	\$543,111
Based on Inflation Factor 2013	\$551,258
Based on Inflation Factors between 2013 and 2024	\$725,751
<b>Total Existing Unit Post-Closure Cost Estimate<sup>(1)</sup> 2024</b>	<b>\$725,751</b>

Proposed Unit Post-Closure Cost Estimate	
Unit	Cost
<b>Total Proposed Unit Post-Closure Cost Estimate</b>	

1. As units are added or deleted from these tables through future permit amendments or modifications, the remaining itemized unit costs should be updated for inflation when re-calculating the revised total cost in current dollars.

**ATTACHMENT VII.A**  
**CLOSURE COST CALCULATIONS**

## HEEL TANK AREA CLOSURE COST ESTIMATE

Table 1 - Estimated Costs Associated with Removal and Waste Disposal Activities

Item No.	Description - Removal & Waste Disposal Activities	Quantity	Unit	Unit Cost	Estimated Cost
1	Waste Removal (Two Technicians 10 hours at \$125/hour)	20	hours	\$125	\$2,500
2	Hazardous Waste Transportation	54,600	gallon	\$0.15	\$8,190
3	Hazardous Waste Disposal	54,600	gallon	\$0.50	\$27,300
4	Stormwater Removal (Two Technicians 10 hours at \$125/hour)	20	hours	\$125	\$2,500
5	Stormwater Waste Transportation	19,453	gallon	\$0.15	\$2,918
6	Stormwater Waste Disposal	19,453	gallon	\$0.50	\$9,726
Total Estimated Cost					\$53,134

Table 2 - Estimated Costs Associated with the Tanks, Ancillary Equipment, and Secondary Containment Cleanup Activities

Item No.	Description - Cleanup of Tanks, Equipment and Concrete	Quantity	Unit	Unit Cost	Estimated Cost
1	Tanks Cleanup (Two Technicians 24 hours at \$125/hour)	48	hours	\$125	\$6,000
2	Washwater Transportation	5,460	gallon	\$0.15	\$819
3	Washwater Disposal	5,460	gallon	\$0.50	\$2,730
4	Concrete Cleanup (Two Technicians 10 hours at \$125/hour)	20	hours	\$125	\$2,500
5	Washwater Transportation	304.50	gallon	\$0.15	\$46
6	Washwater Disposal	304.50	gallon	\$0.15	\$46
7	Contractor Management and Supervision	24	hours	\$250	\$6,000
9	Contractor Mobilization / Demobilization	1	Lump Sum	\$5,000	\$5,000
10	Laboratory Sampling and Analysis	4	Samples	\$500	\$2,000
Total Estimated Cost					\$25,140

Table 3 - Estimated Costs Associated with Site Cleanup

Item No.	Description - Site Security and Closure Report	Quantity	Unit	Unit Cost	Estimated Cost
1	Site Evaluation and Investigation	1	Lump Sum	\$5,000	\$5,000
2	Soil Excavation and Removal	24	hours	\$250	\$6,000
3	Soil Disposal	113.2	cubic yards	\$170	\$19,248
4	Soil Backfill	113.2	cubic yards	\$100	\$11,322
5	Contractor Mobilization / Demobilization	1	Lump Sum	\$5,000	\$5,000
6	Laboratory Sampling and Analysis	24	Samples	\$500	\$12,000
Total Estimated Cost					\$58,570

Table 4 - Estimated Costs Associated with General Administration of Closure

Item No.	Description - Site Security and Closure Report	Quantity	Unit	Unit Cost	Estimated Cost
1	Agency Notifications and Reporting	1	Lump Sum	\$5,000	\$5,000
2	Construction Coordination and Procurement	1	Lump Sum	\$2,500	\$2,500
Total Estimated Cost					\$144,345
3	Engineering and Consulting Services (20%)	20%			\$28,869
4	Contingency (10%)	10%			\$14,434
Total Estimated Cost					\$187,648

**Notes:**

- 1) Estimated costs are based on retaining a third party vendor to conduct final closure activities including contractors, consultants and engineers.
- 2) The total amount of waste to be managed at the time of closure is based on the maximum permitted capacity.
- 3) The estimated costs are based on 2023 US dollars in Houston, Texas.

Number of Tanks = 5

Total Waste Storage Capacity = 54,600 gallons

Stormwater is the average of two wettest consecutive months = 10.25 inches (0.854 feet)

Washwater generation rate = 0.1 gallons per square foot.

Rinsate (tank cleaning) generation rate = 10% of total waste storage capacity.

Secondary Containment Area = 3,045 square foot

Total Stormwater to be disposed offsite = 3,045 X 0.854 X 7.48052

19,452.57 gallons

Tank Cleaning Volume = 54,600 X 10%

5,460.00 gallons

Concrete Rinsate Volume = 3,045 X 0.1

304.5 gallons

Soil Excavation, Depth (ft) = 1

Soil Removal = 1 X 3,045 / 27

113.2 cubic yards

Disposal Costs Per Drum

Cost (\$)

Hazardous Waste

\$200

Non-Hazardous Waste

\$110

Disposal Costs Per Gallon

Hazardous Waste

\$0.50

Non-Hazardous Waste

\$0.15

Disposal Costs Per Cubic Yard

Hazardous Waste

\$170

Non-Hazardous Waste

\$100

Transportation Costs

Per Drum

\$35

Per Gallon

\$0.15



**WASTEWATER EMULSIFIED OIL TREATMENT SYSTEM (WW EOTS)  
CLOSURE COST ESTIMATE**

Table 1 - Estimated Costs Associated with Removal and Waste Disposal Activities

Item No.	Description - Removal & Waste Disposal Activities	Quantity	Unit	Unit Cost	Estimated Cost
1	Waste Removal (Two Technicians 10 hours at \$125/hour)	20	hours	\$125	\$2,500
2	Hazardous Waste Transportation	40,610	gallon	\$0.15	\$6,092
3	Hazardous Waste Disposal	40,610	gallon	\$0.50	\$20,305
4	Stormwater Removal (Two Technicians 10 hours at \$125/hour)	20	hours	\$125	\$2,500
5	Stormwater Waste Transportation	5,609	gallon	\$0.15	\$841
6	Stormwater Waste Disposal	5,609	gallon	\$0.50	\$2,804
Total Estimated Cost					\$35,042

Table 2 - Estimated Costs Associated with the Tanks, Ancillary Equipment, and Secondary Containment Cleanup Activities

Item No.	Description - Cleanup of Tanks, Equipment and Concrete	Quantity	Unit	Unit Cost	Estimated Cost
1	Tanks Cleanup (Two Technicians 24 hours at \$125/hour)	48	hours	\$125	\$6,000
2	Washwater Transportation	4,061	gallon	\$0.15	\$609
3	Washwater Disposal	4,061	gallon	\$0.50	\$2,031
4	Concrete Cleanup (Two Technicians 10 hours at \$125/hour)	20	hours	\$125	\$2,500
5	Washwater Transportation	87.80	gallon	\$0.15	\$13
6	Washwater Disposal	87.80	gallon	\$0.15	\$13
7	Contractor Management and Supervision	24	hours	\$250	\$6,000
9	Contractor Mobilization / Demobilization	1	Lump Sum	\$5,000	\$5,000
10	Laboratory Sampling and Analysis	4	Samples	\$500	\$2,000
Total Estimated Cost					\$24,166

Table 3 - Estimated Costs Associated with Site Cleanup

Item No.	Description - Site Security and Closure Report	Quantity	Unit	Unit Cost	Estimated Cost
1	Site Evaluation and Investigation	1	Lump Sum	\$5,000	\$5,000
2	Soil Excavation and Removal	24	hours	\$250	\$6,000
3	Soil Disposal	32.5	cubic yards	\$170	\$5,528
4	Soil Backfill	32.5	cubic yards	\$100	\$3,252
5	Contractor Mobilization / Demobilization	1	Lump Sum	\$5,000	\$5,000
6	Laboratory Sampling and Analysis	24	Samples	\$500	\$12,000
Total Estimated Cost					\$36,780

Table 4 - Estimated Costs Associated with General Administration of Closure

Item No.	Description - Site Security and Closure Report	Quantity	Unit	Unit Cost	Estimated Cost
1	Agency Notifications and Reporting	1	Lump Sum	\$5,000	\$5,000
2	Construction Coordination and Procurement	1	Lump Sum	\$2,500	\$2,500
Total Estimated Cost					\$103,488
3	Engineering and Consulting Services (20%)	20%			\$20,698
4	Contingency (10%)	10%			\$10,349
Total Estimated Cost					\$134,535

**Notes:**

- 1) Estimated costs are based on retaining a third party vendor to conduct final closure activities including contractors, consultants and engineers.
- 2) The total amount of waste to be managed at the time of closure is based on the maximum permitted capacity.
- 3) The estimated costs are based on 2023 US dollars in Houston, Texas.

Number of Tanks = 2

Total Waste Storage Capacity = 40,610 gallons

Stormwater is the average of two wettest consecutive months = 10.25 inches (0.854 feet)

Washwater generation rate = 0.1 gallons per square foot

Rinsate (tank cleaning) generation rate = 10% of total waste storage capacity.

Secondary Containment Area = 878 square foot

Total Stormwater to be disposed offsite =  $878 \times 0.854 \times 7.48052$

5,609 gallons

Tank Cleaning Volume =  $40,610 \times 10\%$

4,061 gallons

Concrete Rinsate Volume =  $878 \times 0.1$

87.8 gallons

Soil Excavation, Depth (ft) = 1

Soil Removal =  $1 \times 878 / 27$

32.5 cubic yards

Disposal Costs Per Drum

Cost (\$)

Hazardous Waste

\$200

Non-Hazardous Waste

\$110

Disposal Costs Per Gallon

Hazardous Waste

\$0.50

Non-Hazardous Waste

\$0.15

Disposal Costs Per Cubic Yard

Hazardous Waste

\$170

Non-Hazardous Waste

\$100

Transportation Costs

Per Drum

\$35

Per Gallon

\$0.15





### TRUCK UNLOADING AREA CLOSURE COST ESTIMATE

Table 1 - Estimated Costs Associated with Removal and Waste Disposal Activities

Item No.	Description - Removal & Waste Disposal Activities	Quantity	Unit	Unit Cost	Estimated Cost
1	Waste Removal (Two Technicians 10 hours at \$125/hour)	20	hours	\$125	\$2,500
2	Hazardous Waste Transportation (B-1 and B-2)	15,374	gallon	\$0.15	\$2,306
3	Hazardous Waste Disposal (B-1 and B-2)	15,374	gallon	\$0.50	\$7,687
4	Stormwater Removal (Two Technicians 10 hours at \$125/hour)	20	hours	\$125	\$2,500
5	Stormwater Waste Transportation	23,278	gallon	\$0.15	\$3,492
6	Stormwater Waste Disposal	23,278	gallon	\$0.50	\$11,639
Total Estimated Cost					\$30,124

Table 2 - Estimated Costs Associated with the Tanks, Ancillary Equipment, and Secondary Containment Cleanup Activities

Item No.	Description - Cleanup of Tanks, Equipment and Concrete	Quantity	Unit	Unit Cost	Estimated Cost
1	Sumps Cleanup (Two Technicians 10 hours at \$125/hour)	20	hours	\$125	\$2,500
2	Washwater Transportation	1,537	gallon	\$0.15	\$231
3	Washwater Disposal	1,537	gallon	\$0.50	\$769
4	Concrete Cleanup (Two Technicians 10 hours at \$125/hour)	20	hours	\$125	\$2,500
5	Washwater Transportation	364.38	gallon	\$0.15	\$55
6	Washwater Disposal	364.38	gallon	\$0.15	\$55
7	Contractor Management and Supervision	24	hours	\$250	\$6,000
9	Contractor Mobilization / Demobilization	1	Lump Sum	\$5,000	\$5,000
10	Laboratory Sampling and Analysis	4	Samples	\$500	\$2,000
Total Estimated Cost					\$19,109

Table 3 - Estimated Costs Associated with Site Cleanup

Item No.	Description - Site Security and Closure Report	Quantity	Unit	Unit Cost	Estimated Cost
1	Site Evaluation and Investigation	1	Lump Sum	\$5,000	\$5,000
2	Soil Excavation and Removal	24	hours	\$250	\$6,000
3	Soil Disposal	4.3	cubic yards	\$170	\$732
4	Soil Backfill	4.3	cubic yards	\$100	\$431
5	Contractor Mobilization / Demobilization	1	Lump Sum	\$5,000	\$5,000
6	Laboratory Sampling and Analysis	24	Samples	\$500	\$12,000
Total Estimated Cost					\$29,163

Table 4 - Estimated Costs Associated with General Administration of Closure

Item No.	Description - Site Security and Closure Report	Quantity	Unit	Unit Cost	Estimated Cost
1	Agency Notifications and Reporting	1	Lump Sum	\$5,000	\$5,000
2	Construction Coordination and Procurement	1	Lump Sum	\$2,500	\$2,500
Total Estimated Cost					\$85,895
3	Engineering and Consulting Services (20%)	20%			\$17,179
4	Contingency (10%)	10%			\$8,590
Total Estimated Cost					\$111,664

Notes:

- 1) Estimated costs are based on retaining a third party vendor to conduct final closure activities including contractors, consultants and engineers.
- 2) The total amount of waste to be managed at the time of closure is based on the maximum permitted capacity.
- 3) The estimated costs are based on 2023 US dollars in Houston, Texas.

Number of Sump (05-B-1 and 05-B-2) = 2

Total Waste Storage Capacity = 15,374 gallons

Stormwater is the average of two wettest consecutive months = 10.25 inches (0.854 feet)

Washwater generation rate = 0.1 gallons per square foot.

Rinsate (tank cleaning) generation rate = 10% of total waste storage capacity.

Secondary Containment Area = 3,643.75 square foot

Total Stormwater to be disposed offsite = 3,643.75 X 0.854 X 7.48052

23,278

gallons

Tank Cleaning Volume = 15,374 X 10%

1,537

gallons

Concrete Rinsate Volume = 3,643.75 X 0.1

364.375

gallons

Soil Excavation, Depth (ft) = 1

Soil Removal = 1 X 116.3 / 27

4.3

cubic yards

Disposal Costs Per Drum

Cost (\$)

Hazardous Waste

\$200

Non-Hazardous Waste

\$110

Disposal Costs Per Gallon

Hazardous Waste

\$0.50

Non-Hazardous Waste

\$0.15

Disposal Costs Per Cubic Yard

Hazardous Waste

\$170

Non-Hazardous Waste

\$100

Transportation Costs

Per Drum

\$35

Per Gallon

\$0.15





05-F-4 AREA  
CLOSURE COST ESTIMATE

Table 1 - Estimated Costs Associated with Removal and Waste Disposal Activities

Item No.	Description - Removal & Waste Disposal Activities	Quantity	Unit	Unit Cost	Estimated Cost
1	Waste Removal (Two Technicians 10 hours at \$125/hour)	20	hours	\$125	\$2,500
2	Hazardous Waste Transportation (B-1 and B-2)	1	Lump Sum	\$1,500	\$1,500
3	Hazardous Waste Disposal (B-1 and B-2)	1	Lump Sum	\$3,500	\$3,500
4	Stormwater Removal (Two Technicians 10 hours at \$125/hour)	20	hours	\$125	\$2,500
5	Stormwater Waste Transportation	1,681	gallon	\$0.15	\$252
6	Stormwater Waste Disposal	1,681	gallon	\$0.50	\$840
Total Estimated Cost					\$11,093

Table 2 - Estimated Costs Associated with the Tanks, Ancillary Equipment, and Secondary Containment Cleanup Activities

Item No.	Description - Cleanup of Tanks, Equipment and Concrete	Quantity	Unit	Unit Cost	Estimated Cost
1	Tank Cleanup (Two Technicians 8 hours at \$125/hour)	16	hours	\$125	\$2,000
2	Washwater Transportation	1	Lump Sum	\$1,500	\$1,500
3	Washwater Disposal	1	Lump Sum	\$3,500	\$3,500
4	Concrete Cleanup (Two Technicians 8 hours at \$125/hour)	16	hours	\$125	\$2,000
5	Washwater Transportation	1	Lump Sum	\$1,500	\$1,500
6	Washwater Disposal	1	Lump Sum	\$3,500	\$1,750
7	Contractor Management and Supervision	24	hours	\$250	\$6,000
9	Contractor Mobilization / Demobilization	1	Lump Sum	\$5,000	\$5,000
10	Laboratory Sampling and Analysis	4	Samples	\$500	\$2,000
Total Estimated Cost					\$24,500

Table 3 - Estimated Costs Associated with Site Cleanup

Item No.	Description - Site Security and Closure Report	Quantity	Unit	Unit Cost	Estimated Cost
1	Site Evaluation and Investigation	1	Lump Sum	\$5,000	\$5,000
2	Soil Excavation and Removal	16	hours	\$250	\$4,000
3	Soil Disposal	9.7	cubic yards	\$170	\$1,657
4	Soil Backfill	9.7	cubic yards	\$100	\$974
5	Contractor Mobilization / Demobilization	1	Lump Sum	\$5,000	\$5,000
6	Laboratory Sampling and Analysis	24	Samples	\$500	\$12,000
Total Estimated Cost					\$28,631

Table 4 - Estimated Costs Associated with General Administration of Closure

Item No.	Description - Site Security and Closure Report	Quantity	Unit	Unit Cost	Estimated Cost
1	Agency Notifications and Reporting	1	Lump Sum	\$5,000	\$5,000
2	Construction Coordination and Procurement	1	Lump Sum	\$2,500	\$2,500
Total Estimated Cost					\$71,724
3	Engineering and Consulting Services (20%)	20%			\$14,345
4	Contingency (10%)	10%			\$7,172
Total Estimated Cost					\$93,241

Notes:

- 1) Estimated costs are based on retaining a third party vendor to conduct final closure activities including contractors, consultants and engineers.
- 2) The total amount of waste to be managed at the time of closure is based on the maximum permitted capacity.
- 3) The estimated costs are based on 2023 US dollars in Houston, Texas.
- 4) Hazardous waste transportation and disposal costs are based on one truck shipment, and not by gallons.
- 5) Wastewater transportation and disposal costs are based on one truck shipment, and not by gallons.

Number of Units = 1

Total Waste Storage Capacity = 400 gallons

Stormwater is the average of two wettest consecutive months = 10.25 inches (0.854 feet)

Washwater generation rate = 0.1 gallons per square foot.

Rinsate (tank cleaning) generation rate = 10% of total waste storage capacity.

Secondary Containment Area = 263.11 square foot

Total Stormwater to be disposed offsite = 263.11 X 0.854 X 7.48052

Tank Cleaning Volume = 400 X 10%

Concrete Rinsate Volume = 263.11 X 0.1

Soil Excavation, Depth (ft) = 1

Soil Removal = 1 X 263.11 / 27

Disposal Costs Per Drum

Hazardous Waste

Non-Hazardous Waste

Disposal Costs Per Gallon

Hazardous Waste

Non-Hazardous Waste

Disposal Costs Per Cubic Yard

Hazardous Waste

Non-Hazardous Waste

Transportation Costs

Per Drum

Per Gallon

1,681 gallons  
40 gallons  
263.11 gallons

9.7 cubic yards

Cost (\$)

\$200

\$110

\$0.50

\$0.15

\$170

\$100

\$35

\$0.15



### EMULSIFIED OIL TREATMENT SYSTEM (EOTS) CLOSURE COST ESTIMATE

Table 1 - Estimated Costs Associated with Removal and Waste Disposal Activities

Item No.	Description - Removal & Waste Disposal Activities	Quantity	Unit	Unit Cost	Estimated Cost
1	Waste Removal (Two Technicians 10 hours at \$125/hour)	20	hours	\$125	\$2,500
2	Hazardous Waste Transportation	49,230	gallon	\$0.15	\$7,385
3	Hazardous Waste Disposal	49,230	gallon	\$0.50	\$24,615
4	Stormwater Removal (Two Technicians 10 hours at \$125/hour)	20	hours	\$125	\$2,500
5	Stormwater Waste Transportation	20,737	gallon	\$0.15	\$3,110
6	Stormwater Waste Disposal	20,737	gallon	\$0.50	\$10,368
Total Estimated Cost					\$50,478

Table 2 - Estimated Costs Associated with the Tanks, Ancillary Equipment, and Secondary Containment Cleanup Activities

Item No.	Description - Cleanup of Tanks, Equipment and Concrete	Quantity	Unit	Unit Cost	Estimated Cost
1	Tanks Cleanup (Two Technicians 26 hours at \$125/hour)	52	hours	\$125	\$6,500
2	Washwater Transportation	4,923	gallon	\$0.15	\$738
3	Washwater Disposal	4,923	gallon	\$0.50	\$2,462
4	Concrete Cleanup (Two Technicians 24 hours at \$125/hour)	24	hours	\$125	\$3,000
5	Washwater Transportation	324.60	gallon	\$0.15	\$49
6	Washwater Disposal	324.60	gallon	\$0.15	\$49
7	Contractor Management and Supervision	24	hours	\$250	\$6,000
9	Contractor Mobilization / Demobilization	1	Lump Sum	\$5,000	\$5,000
10	Laboratory Sampling and Analysis	5	Samples	\$500	\$2,500
Total Estimated Cost					\$26,297

Table 3 - Estimated Costs Associated with Site Cleanup

Item No.	Description - Site Security and Closure Report	Quantity	Unit	Unit Cost	Estimated Cost
1	Site Evaluation and Investigation	1	Lump Sum	\$5,000	\$5,000
2	Soil Excavation and Removal	24	hours	\$250	\$6,000
3	Soil Disposal	120.2	cubic yards	\$170	\$20,438
4	Soil Backfill	120.2	cubic yards	\$100	\$12,022
5	Contractor Mobilization / Demobilization	1	Lump Sum	\$5,000	\$5,000
6	Laboratory Sampling and Analysis	24	Samples	\$500	\$12,000
Total Estimated Cost					\$60,460

Table 4 - Estimated Costs Associated with General Administration of Closure

Item No.	Description - Site Security and Closure Report	Quantity	Unit	Unit Cost	Estimated Cost
1	Agency Notifications and Reporting	1	Lump Sum	\$5,000	\$5,000
2	Construction Coordination and Procurement	1	Lump Sum	\$2,500	\$2,500
Total Estimated Cost					\$144,736
3	Engineering and Consulting Services (20%)	20%			\$28,947
4	Contingency (10%)	10%			\$14,474
Total Estimated Cost					\$188,156

**Notes:**

- 1) Estimated costs are based on retaining a third party vendor to conduct final closure activities including contractors, consultants and engineers.
- 2) The total amount of waste to be managed at the time of closure is based on the maximum permitted capacity.
- 3) The estimated costs are based on 2023 US dollars in Houston, Texas.

Number of Tanks = 4

Total Waste Storage Capacity = 49,230 gallons

Stormwater is the average of two wettest consecutive months = 10.25 inches (0.854 feet)

Washwater generation rate = 0.1 gallons per square foot.

Rinsate (tank cleaning) generation rate = 10% of total waste storage capacity.

Secondary Containment Area = 3,246 square foot

Total Stormwater to be disposed offsite = 3,246 X 0.854 X 7.48052

20,736.63 gallons

Tank Cleaning Volume = 49,230 X 10%

4,923.00 gallons

Concrete Rinsate Volume = 3,246 X 0.1

324.6 gallons

Soil Excavation, Depth (ft) = 1

Soil Removal = 1 X 3,246 / 27

120.2 cubic yards

Disposal Costs Per Drum

Cost (\$)

Hazardous Waste

\$200

Non-Hazardous Waste

\$110

Disposal Costs Per Gallon

Hazardous Waste

\$0.50

Non-Hazardous Waste

\$0.15

Disposal Costs Per Cubic Yard

Hazardous Waste

\$170

Non-Hazardous Waste

\$100

Transportation Costs

Per Drum

\$35

Per Gallon

\$0.15





# EMULSIFIED OIL TREATMENT SYSTEM (EOTS) - PROPOSED CLOSURE COST ESTIMATE

Table 1 - Estimated Costs Associated with Removal and Waste Disposal Activities

Item No.	Description - Removal & Waste Disposal Activities	Quantity	Unit	Unit Cost	Estimated Cost
1	Waste Removal (Two Technicians 10 hours at \$125/hour)	20	hours	\$125	\$2,500
2	Hazardous Waste Transportation	121,200	gallon	\$0.15	\$18,180
3	Hazardous Waste Disposal	121,200	gallon	\$0.50	\$60,600
4	Stormwater Removal (Two Technicians 10 hours at \$125/hour)	20	hours	\$125	\$2,500
5	Stormwater Waste Transportation	20,737	gallon	\$0.15	\$3,110
6	Stormwater Waste Disposal	20,737	gallon	\$0.50	\$10,368
Total Estimated Cost					\$97,259

Table 2 - Estimated Costs Associated with the Tanks, Ancillary Equipment, and Secondary Containment Cleanup Activities

Item No.	Description - Cleanup of Tanks, Equipment and Concrete	Quantity	Unit	Unit Cost	Estimated Cost
1	Tanks Cleanup (Two Technicians 26 hours at \$125/hour)	52	hours	\$125	\$6,500
2	Washwater Transportation	12,120	gallon	\$0.15	\$1,818
3	Washwater Disposal	12,120	gallon	\$0.50	\$6,060
4	Concrete Cleanup (Two Technicians 24 hours at \$125/hour)	24	hours	\$125	\$3,000
5	Washwater Transportation	324.60	gallon	\$0.15	\$49
6	Washwater Disposal	324.60	gallon	\$0.15	\$49
7	Contractor Management and Supervision	24	hours	\$250	\$6,000
9	Contractor Mobilization / Demobilization	1	Lump Sum	\$5,000	\$5,000
10	Laboratory Sampling and Analysis	5	Samples	\$500	\$2,500
Total Estimated Cost					\$30,975

Table 3 - Estimated Costs Associated with Site Cleanup

Item No.	Description - Site Security and Closure Report	Quantity	Unit	Unit Cost	Estimated Cost
1	Site Evaluation and Investigation	1	Lump Sum	\$5,000	\$5,000
2	Soil Excavation and Removal	24	hours	\$250	\$6,000
3	Soil Disposal	120.2	cubic yards	\$170	\$20,438
4	Soil Backfill	120.2	cubic yards	\$100	\$12,022
5	Contractor Mobilization / Demobilization	1	Lump Sum	\$5,000	\$5,000
6	Laboratory Sampling and Analysis	24	Samples	\$500	\$12,000
Total Estimated Cost					\$60,460

Table 4 - Estimated Costs Associated with General Administration of Closure

Item No.	Description - Site Security and Closure Report	Quantity	Unit	Unit Cost	Estimated Cost
1	Agency Notifications and Reporting	1	Lump Sum	\$5,000	\$5,000
2	Construction Coordination and Procurement	1	Lump Sum	\$2,500	\$2,500
Total Estimated Cost					\$196,194
3	Engineering and Consulting Services (20%)	20%			\$39,239
4	Contingency (10%)	10%			\$19,619
Total Estimated Cost					\$255,052

## Notes:

- 1) Estimated costs are based on retaining a third party vendor to conduct final closure activities including contractors, consultants and engineers.
- 2) The total amount of waste to be managed at the time of closure is based on the maximum permitted capacity.
- 3) The estimated costs are based on 2023 US dollars in Houston, Texas.

Number of Tanks = 6

Total Waste Storage Capacity = 121,200 gallons

Stormwater is the average of two wettest consecutive months = 10.25 inches (0.854 feet)

Washwater generation rate = 0.1 gallons per square foot.

Rinsate (tank cleaning) generation rate = 10% of total waste storage capacity.

Secondary Containment Area = 3,246 square foot

Total Stormwater to be disposed offsite = 3,246 X 0.854 X 7.48052

Tank Cleaning Volume = 121,200 X 10%

Concrete Rinsate Volume = 3,246 X 0.1

20,736.63 gallons  
12,120.00 gallons  
324.6 gallons

Soil Excavation, Depth (ft) = 1

Soil Removal = 1 X 3,246 / 27

120.2 cubic yards

Disposal Costs Per Drum

Hazardous Waste

Non-Hazardous Waste

Cost (\$)  
\$200  
\$110

Disposal Costs Per Gallon

Hazardous Waste

Non-Hazardous Waste

\$0.50  
\$0.15

Disposal Costs Per Cubic Yard

Hazardous Waste

Non-Hazardous Waste

\$170  
\$100

Transportation Costs

Per Drum

Per Gallon

\$35  
\$0.15



### 500 SERIES STORAGE AREA CLOSURE COST ESTIMATE

Table 1 - Estimated Costs Associated with Removal and Waste Disposal Activities

Item No.	Description - Removal & Waste Disposal Activities	Quantity	Unit	Unit Cost	Estimated Cost
1	Waste Removal (Four Technicians 10 hours at \$125/hour)	40	hours	\$125	\$5,000
2	Hazardous Waste Transportation	2,184,050	gallon	\$0.15	\$327,608
3	Hazardous Waste Disposal	2,184,050	gallon	\$0.50	\$1,092,025
4	Stormwater Removal (Four Technicians 10 hours at \$125/hour)	40	hours	\$125	\$5,000
5	Stormwater Waste Transportation	274,802	gallon	\$0.15	\$41,220
6	Stormwater Waste Disposal	274,802	gallon	\$0.50	\$137,401
Total Estimated Cost					\$1,608,254

Table 2 - Estimated Costs Associated with the Tanks, Ancillary Equipment, and Secondary Containment Cleanup Activities

Item No.	Description - Cleanup of Tanks, Equipment and Concrete	Quantity	Unit	Unit Cost	Estimated Cost
1	Tanks Cleanup (Four Technicians 24 hours at \$125/hour)	96	hours	\$125	\$12,000
2	Washwater Transportation	218,405	gallon	\$0.15	\$32,761
3	Washwater Disposal	218,405	gallon	\$0.50	\$109,203
4	Concrete Cleanup (Four Technicians 20 hours at \$125/hour)	80	hours	\$125	\$10,000
5	Washwater Transportation	4,301.60	gallon	\$0.15	\$645
6	Washwater Disposal	4,301.60	gallon	\$0.15	\$645
7	Contractor Management and Supervision	24	hours	\$250	\$6,000
9	Contractor Mobilization / Demobilization	1	Lump Sum	\$5,000	\$5,000
10	Laboratory Sampling and Analysis	10	Samples	\$500	\$5,000
Total Estimated Cost					\$181,254

Table 3 - Estimated Costs Associated with Site Cleanup

Item No.	Description - Site Security and Closure Report	Quantity	Unit	Unit Cost	Estimated Cost
1	Site Evaluation and Investigation	1	Lump Sum	\$5,000	\$5,000
2	Soil Excavation and Removal	40	hours	\$250	\$10,000
3	Soil Disposal	1593.2	cubic yards	\$170	\$270,841
4	Soil Backfill	1593.2	cubic yards	\$100	\$159,319
5	Contractor Mobilization / Demobilization	1	Lump Sum	\$5,000	\$5,000
6	Laboratory Sampling and Analysis	24	Samples	\$500	\$12,000
Total Estimated Cost					\$462,160

Table 4 - Estimated Costs Associated with General Administration of Closure

Item No.	Description - Site Security and Closure Report	Quantity	Unit	Unit Cost	Estimated Cost
1	Agency Notifications and Reporting	1	Lump Sum	\$5,000	\$5,000
2	Construction Coordination and Procurement	1	Lump Sum	\$2,500	\$2,500
Total Estimated Cost					\$2,259,167
3	Engineering and Consulting Services (20%)	20%			\$451,833
4	Contingency (10%)	10%			\$225,917
Total Estimated Cost					\$2,936,918

**Notes:**

- 1) Estimated costs are based on retaining a third party vendor to conduct final closure activities including contractors, consultants and engineers.
- 2) The total amount of waste to be managed at the time of closure is based on the maximum permitted capacity.
- 3) The estimated costs are based on 2023 US dollars in Houston, Texas.

Number of Tanks = 7

Total Waste Storage Capacity = 2,184,050 gallons

Stormwater is the average of two wettest consecutive months = 10.25 inches (0.854 feet)

Washwater generation rate = 0.1 gallons per square foot.

Rinsate (tank cleaning) generation rate = 10% of total waste storage capacity.

Secondary Containment Area = 43,016 square foot

Total Stormwater to be disposed offsite = 43,016 X 0.854 X 7.48052

Tank Cleaning Volume = 2,184,050 X 10%

Concrete Rinsate Volume = 43,016 X 0.1

274,801.87 gallons  
218,405.00 gallons  
4301.6 gallons

Soil Excavation, Depth (ft) = 1

Soil Removal = 1 X 43016/ 27

1593.2 cubic yards

Disposal Costs Per Drum

Hazardous Waste

Non-Hazardous Waste

Cost (\$)  
\$200  
\$110

Disposal Costs Per Gallon

Hazardous Waste

Non-Hazardous Waste

\$0.50  
\$0.15

Disposal Costs Per Cubic Yard

Hazardous Waste

Non-Hazardous Waste

\$170  
\$100

Transportation Costs

Per Drum

Per Gallon

\$35  
\$0.15





## DEEPWELL INJECTION AREA CLOSURE COST ESTIMATE

Table 1 - Estimated Costs Associated with Removal and Waste Disposal Activities

Item No.	Description - Removal & Waste Disposal Activities	Quantity	Unit	Unit Cost	Estimated Cost
1	Waste Removal (Four Technicians 10 hours at \$125/hour)	40	hours	\$125	\$5,000
2	Hazardous Waste Transportation	518,352	gallon	\$0.15	\$77,753
3	Hazardous Waste Disposal	518,352	gallon	\$0.50	\$259,176
4	Stormwater Removal (Four Technicians 10 hours at \$125/hour)	40	hours	\$125	\$5,000
5	Stormwater Waste Transportation	93,232	gallon	\$0.15	\$13,985
6	Stormwater Waste Disposal	93,232	gallon	\$0.50	\$46,616
Total Estimated Cost					\$407,529

Table 2 - Estimated Costs Associated with the Tanks, Ancillary Equipment, and Secondary Containment Cleanup Activities

Item No.	Description - Cleanup of Tanks, Equipment and Concrete	Quantity	Unit	Unit Cost	Estimated Cost
1	Tanks Cleanup (Four Technicians 24 hours at \$125/hour)	96	hours	\$125	\$12,000
2	Washwater Transportation	51,835	gallon	\$0.15	\$7,775
3	Washwater Disposal	51,835	gallon	\$0.50	\$25,918
4	Concrete Cleanup (Four Technicians 20 hours at \$125/hour)	80	hours	\$125	\$10,000
5	Washwater Transportation	1,461.50	gallon	\$0.15	\$219
6	Washwater Disposal	1,461.50	gallon	\$0.15	\$219
7	Contractor Management and Supervision	24	hours	\$250	\$6,000
9	Contractor Mobilization / Demobilization	1	Lump Sum	\$5,000	\$5,000
10	Laboratory Sampling and Analysis	10	Samples	\$500	\$5,000
Total Estimated Cost					\$72,131

Table 3 - Estimated Costs Associated with Site Cleanup

Item No.	Description - Site Security and Closure Report	Quantity	Unit	Unit Cost	Estimated Cost
1	Site Evaluation and Investigation	1	Lump Sum	\$5,000	\$5,000
2	Soil Excavation and Removal	40	hours	\$250	\$10,000
3	Soil Disposal	270.3	cubic yards	\$170	\$45,944
4	Soil Backfill	270.3	cubic yards	\$100	\$27,026
5	Contractor Mobilization / Demobilization	1	Lump Sum	\$5,000	\$5,000
6	Laboratory Sampling and Analysis	24	Samples	\$500	\$12,000
Total Estimated Cost					\$104,970

Table 4 - Estimated Costs Associated with General Administration of Closure

Item No.	Description - Site Security and Closure Report	Quantity	Unit	Unit Cost	Estimated Cost
1	Agency Notifications and Reporting	1	Lump Sum	\$5,000	\$5,000
2	Construction Coordination and Procurement	1	Lump Sum	\$2,500	\$2,500
Total Estimated Cost					\$592,131
3	Engineering and Consulting Services (20%)	20%			\$118,426
4	Contingency (10%)	10%			\$59,213
Total Estimated Cost					\$769,770

**Notes:**

- 1) Estimated costs are based on retaining a third party vendor to conduct final closure activities including contractors, consultants and engineers.
- 2) The total amount of waste to be managed at the time of closure is based on the maximum permitted capacity.
- 3) The estimated costs are based on 2023 US dollars in Houston, Texas.

Number of Tanks = 23

Total Waste Storage Capacity = 518,352 gallons

Stormwater is the average of two wettest consecutive months = 10.25 inches (0.854 feet)

Washwater generation rate = 0.1 gallons per square foot.

Rinsate (tank cleaning) generation rate = 10% of total waste storage capacity.

Secondary Containment Area = 14,615 square foot

Total Stormwater to be disposed offsite = 14,615 X 0.854 X 7.48052

93,231.79

gallons

Tank Cleaning Volume = 518,352 X 10%

51,835.20

gallons

Concrete Rinsate Volume = 14,615 X 0.1

1461.5

gallons

Soil Excavation, Depth (ft) = 1

Soil Removal = 0.5 X 14,615 / 27

270.3

cubic yards

Disposal Costs Per Drum

Cost (\$)

Hazardous Waste

\$200

Non-Hazardous Waste

\$110

Disposal Costs Per Gallon

Hazardous Waste

\$0.50

Non-Hazardous Waste

\$0.15

Disposal Costs Per Cubic Yard

Hazardous Waste

\$170

Non-Hazardous Waste

\$100

Transportation Costs

Per Drum

\$35

Per Gallon

\$0.15



**CONTAINER STORAGE AREA (CSA) 05-D-1  
CLOSURE COST ESTIMATE**

**Table 1 - Estimated Costs Associated with Removal and Waste Disposal Activities**

Item No.	Description - Removal & Waste Disposal Activities	Quantity	Unit	Unit Cost	Estimated Cost
1	Waste Removal (Two Technicians 8 hours at \$125/hour)	16	hours	\$125	\$2,000
2	Hazardous Waste Transportation	89,760	gallon	\$0.15	\$13,464
3	Hazardous Waste Disposal	89,760	gallon	\$0.50	\$44,880
4	Stormwater Removal (Two Technicians 8 hours at \$125/hour)	16	hours	\$125	\$2,000
5	Stormwater Waste Transportation	6,519	gallon	\$0.15	\$978
6	Stormwater Waste Disposal	6,519	gallon	\$0.50	\$3,260
	<b>Total Estimated Cost</b>				<b>\$66,582</b>

**Table 2 - Estimated Costs Associated with the Tanks, Ancillary Equipment, and Secondary Containment Cleanup Activities**

Item No.	Description - Cleanup of Tanks, Equipment and Concrete	Quantity	Unit	Unit Cost	Estimated Cost
1	Containers Cleanup	0	hours	\$125	\$0
2	Washwater Transportation	0	gallon	\$0.15	\$0
3	Washwater Disposal	0	gallon	\$0.50	\$0
4	Concrete Cleanup (Two Technicians 8 hours at \$125/hour)	16	hours	\$125	\$2,000
5	Washwater Transportation	264.10	gallon	\$0.15	\$40
6	Washwater Disposal	264.10	gallon	\$0.50	\$132
7	Contractor Management and Supervision	8	hours	\$250	\$2,000
9	Contractor Mobilization / Demobilization	1	Lump Sum	\$5,000	\$5,000
10	Laboratory Sampling and Analysis	10	Samples	\$500	\$5,000
	<b>Total Estimated Cost</b>				<b>\$14,079</b>

**Table 3 - Estimated Costs Associated with Site Cleanup**

Item No.	Description - Site Security and Closure Report	Quantity	Unit	Unit Cost	Estimated Cost
1	Site Evaluation and Investigation	1	Lump Sum	\$5,000	\$5,000
2	Soil Excavation and Removal	24	hours	\$250	\$6,000
3	Soil Disposal	97.8	cubic yards	\$170	\$16,629
4	Soil Backfill	97.8	cubic yards	\$100	\$9,781
5	Contractor Mobilization / Demobilization	1	Lump Sum	\$5,000	\$5,000
6	Laboratory Sampling and Analysis	24	Samples	\$500	\$12,000
	<b>Total Estimated Cost</b>				<b>\$54,410</b>

**Table 4 - Estimated Costs Associated with General Administration of Closure**

Item No.	Description - Site Security and Closure Report	Quantity	Unit	Unit Cost	Estimated Cost
1	Agency Notifications and Reporting	1	Lump Sum	\$5,000	\$5,000
2	Construction Coordination and Procurement	1	Lump Sum	\$2,500	\$2,500
	<b>Total Estimated Cost</b>				<b>\$142,571</b>
3	Engineering and Consulting Services (20%)	20%			\$28,514
4	Contingency (10%)	10%			\$14,257
	<b>Total Estimated Cost</b>				<b>\$185,342</b>

**Notes:**

- 1) Estimated costs are based on retaining a third party vendor to conduct final closure activities including contractors, consultants and engineers.
- 2) The total amount of waste to be managed at the time of closure is based on the maximum permitted capacity.
- 3) The estimated costs are based on 2023 US dollars in Houston, Texas.

Total Waste Storage Capacity = 89,760 gallons  
Area is Covered, But Assume Stormwater = 4 inches (height of curb)  
Washwater generation rate = 0.1 gallons per square foot.  
Rinsate (container cleaning) generation rate = 10% of total waste storage capacity.  
Secondary Containment Area = 2,641 square foot

Total Stormwater to be disposed offsite = 2,641 X 0.33 X 7.48052  
Container Cleaning Volume = 89,760 X 10%  
Concrete Rinsate Volume = 2,641 X 0.1

6,519.50      gallons  
8,976.00      gallons  
264.1          gallons

Soil Excavation, Depth (ft) =1  
Soil Removal =1 X 2641 / 27

97.8          cubic yards

Disposal Costs Per Drum  
Hazardous Waste  
Non-Hazardous Waste

Cost (\$)  
\$200  
\$110

Disposal Costs Per Gallon  
Hazardous Waste  
Non-Hazardous Waste

\$0.50  
\$0.15

Disposal Costs Per Cubic Yard  
Hazardous Waste  
Non-Hazardous Waste

\$170  
\$100

Transportation Costs  
Per Drum  
Per Gallon

\$35  
\$0.15





**CONTAINER STORAGE AREA (CSA) 05-D-1 (Proposed Expansion)  
CLOSURE COST ESTIMATE**

**Table 1 - Estimated Costs Associated with Removal and Waste Disposal Activities**

Item No.	Description - Removal & Waste Disposal Activities	Quantity	Unit	Unit Cost	Estimated Cost
1	Waste Removal (Two Technicians 8 hours at \$125/hour)	16	hours	\$125	\$2,000
2	Hazardous Waste Transportation	153,120	gallon	\$0.15	\$22,968
3	Hazardous Waste Disposal	153,120	gallon	\$0.50	\$76,560
4	Stormwater Removal (Two Technicians 8 hours at \$125/hour)	16	hours	\$125	\$2,000
5	Stormwater Waste Transportation	14,051	gallon	\$0.15	\$2,108
6	Stormwater Waste Disposal	14,051	gallon	\$0.50	\$7,026
	<b>Total Estimated Cost</b>				<b>\$112,661</b>

**Table 2 - Estimated Costs Associated with the Tanks, Ancillary Equipment, and Secondary Containment Cleanup Activities**

Item No.	Description - Cleanup of Tanks, Equipment and Concrete	Quantity	Unit	Unit Cost	Estimated Cost
1	Containers Cleanup	0	hours	\$125	\$0
2	Washwater Transportation	0	gallon	\$0.15	\$0
3	Washwater Disposal	0	gallon	\$0.50	\$0
4	Concrete Cleanup (Two Technicians 8 hours at \$125/hour)	16	hours	\$125	\$2,000
5	Washwater Transportation	569.20	gallon	\$0.15	\$85
6	Washwater Disposal	569.20	gallon	\$0.15	\$85
7	Contractor Management and Supervision	8	hours	\$250	\$2,000
9	Contractor Mobilization / Demobilization	1	Lump Sum	\$5,000	\$5,000
10	Laboratory Sampling and Analysis	10	Samples	\$500	\$5,000
	<b>Total Estimated Cost</b>				<b>\$14,171</b>

**Table 3 - Estimated Costs Associated with Site Cleanup**

Item No.	Description - Site Security and Closure Report	Quantity	Unit	Unit Cost	Estimated Cost
1	Site Evaluation and Investigation	1	Lump Sum	\$5,000	\$5,000
2	Soil Excavation and Removal	24	hours	\$250	\$6,000
3	Soil Disposal	105.4	cubic yards	\$170	\$17,919
4	Soil Backfill	105.4	cubic yards	\$100	\$10,541
5	Contractor Mobilization / Demobilization	1	Lump Sum	\$5,000	\$5,000
6	Laboratory Sampling and Analysis	24	Samples	\$500	\$12,000
	<b>Total Estimated Cost</b>				<b>\$56,460</b>

**Table 4 - Estimated Costs Associated with General Administration of Closure**

Item No.	Description - Site Security and Closure Report	Quantity	Unit	Unit Cost	Estimated Cost
1	Agency Notifications and Reporting	1	Lump Sum	\$5,000	\$5,000
2	Construction Coordination and Procurement	1	Lump Sum	\$2,500	\$2,500
	<b>Total Estimated Cost</b>				<b>\$190,792</b>
3	Engineering and Consulting Services (20%)	20%			\$38,158
4	Contingency (10%)	10%			\$19,079
	<b>Total Estimated Cost</b>				<b>\$248,030</b>

**Notes:**

- 1) Estimated costs are based on retaining a third party vendor to conduct final closure activities including contractors, consultants and engineers.
- 2) The total amount of waste to be managed at the time of closure is based on the maximum permitted capacity.
- 3) The estimated costs are based on 2023 US dollars in Houston, Texas.

Total Waste Storage Capacity = 153,120 gallons  
Area is Covered, But Assume Stormwater = 4 inches (height of curb)  
Washwater generation rate = 0.1 gallons per square foot.  
Rinsate (container cleaning) generation rate = 10% of total waste storage capacity.  
Secondary Containment Area = 5,692 square foot

Total Stormwater to be disposed offsite = 5,692 X 0.33 X 7.48052  
Container Cleaning Volume = 153,120 X 10%  
Concrete Rinsate Volume = 5,692 X 0.1

14,051.11      gallons  
15,312.00      gallons  
569.2          gallons

Soil Excavation, Depth (ft) = 0.5  
Soil Removal = 0.5 X 5,692 / 27

105.4          cubic yards

Disposal Costs Per Drum  
Hazardous Waste  
Non-Hazardous Waste

Cost (\$)  
\$200  
\$110

Disposal Costs Per Gallon  
Hazardous Waste  
Non-Hazardous Waste

\$0.50  
\$0.15

Disposal Costs Per Cubic Yard  
Hazardous Waste  
Non-Hazardous Waste

\$170  
\$100

Transportation Costs  
Per Drum  
Per Gallon

\$35  
\$0.15



### CONTAINER STORAGE AREA (CSA) 05-D-3 CLOSURE COST ESTIMATE

Table 1 - Estimated Costs Associated with Removal and Waste Disposal Activities

Item No.	Description - Removal & Waste Disposal Activities	Quantity	Unit	Unit Cost	Estimated Cost
1	Waste Removal (Two Technicians 8 hours at \$125/hour)	16	hours	\$125	\$2,000
2	Hazardous Waste Transportation	49,692	gallon	\$0.15	\$7,454
3	Hazardous Waste Disposal	49,692	gallon	\$0.50	\$24,846
4	Stormwater Removal (Two Technicians 8 hours at \$125/hour)	16	hours	\$125	\$2,000
5	Stormwater Waste Transportation	23,247	gallon	\$0.15	\$3,487
6	Stormwater Waste Disposal	23,247	gallon	\$0.50	\$11,624
Total Estimated Cost					\$51,411

Table 2 - Estimated Costs Associated with the Tanks, Ancillary Equipment, and Secondary Containment Cleanup Activities

Item No.	Description - Cleanup of Tanks, Equipment and Concrete	Quantity	Unit	Unit Cost	Estimated Cost
1	Containers Cleanup	0	hours	\$125	\$0
2	Washwater Transportation	0	gallon	\$0.15	\$0
3	Washwater Disposal	0	gallon	\$0.50	\$0
4	Concrete Cleanup (Two Technicians 8 hours at \$125/hour)	16	hours	\$125	\$2,000
5	Washwater Transportation	363.90	gallon	\$0.15	\$55
6	Washwater Disposal	363.90	gallon	\$0.15	\$55
7	Contractor Management and Supervision	8	hours	\$250	\$2,000
9	Contractor Mobilization / Demobilization	1	Lump Sum	\$5,000	\$5,000
10	Laboratory Sampling and Analysis	10	Samples	\$500	\$5,000
Total Estimated Cost					\$14,109

Table 3 - Estimated Costs Associated with Site Cleanup

Item No.	Description - Site Security and Closure Report	Quantity	Unit	Unit Cost	Estimated Cost
1	Site Evaluation and Investigation	1	Lump Sum	\$5,000	\$5,000
2	Soil Excavation and Removal	24	hours	\$250	\$6,000
3	Soil Disposal	134.8	cubic yards	\$170	\$22,912
4	Soil Backfill	134.8	cubic yards	\$100	\$13,478
5	Contractor Mobilization / Demobilization	1	Lump Sum	\$5,000	\$5,000
6	Laboratory Sampling and Analysis	24	Samples	\$500	\$12,000
Total Estimated Cost					\$64,390

Table 4 - Estimated Costs Associated with General Administration of Closure

Item No.	Description - Site Security and Closure Report	Quantity	Unit	Unit Cost	Estimated Cost
1	Agency Notifications and Reporting	1	Lump Sum	\$5,000	\$5,000
2	Construction Coordination and Procurement	1	Lump Sum	\$2,500	\$2,500
Total Estimated Cost					\$137,410
3	Engineering and Consulting Services (20%)	20%			\$27,482
4	Contingency (10%)	10%			\$13,741
Total Estimated Cost					\$178,633

**Notes:**

- 1) Estimated costs are based on retaining a third party vendor to conduct final closure activities including contractors, consultants and engineers.
- 2) The total amount of waste to be managed at the time of closure is based on the maximum permitted capacity.
- 3) The estimated costs are based on 2023 US dollars in Houston, Texas.

Total Waste Storage Capacity = 49,692 gallons  
Stormwater is the average of two wettest consecutive months = 10.25 inches (0.854 feet)  
Washwater generation rate = 0.1 gallons per square foot.  
Rinsate (container cleaning) generation rate = 10% of total waste storage capacity.  
Secondary Containment Area = 3,639 square foot

Total Stormwater to be disposed offsite = 3,639 X 0.854 X 7.48052	23,247.26	gallons
Container Cleaning Volume = 49,692 X 10%	4,969.20	gallons
Concrete Rinsate Volume = 3,639 X 0.1	363.9	gallons
Soil Excavation, Depth (ft) =1		
Soil Removal =1.0 X 3,693 / 27	134.8	cubic yards
Disposal Costs Per Drum	Cost (\$)	
Hazardous Waste	\$200	
Non-Hazardous Waste	\$110	
Disposal Costs Per Gallon		
Hazardous Waste	\$0.50	
Non-Hazardous Waste	\$0.15	
Disposal Costs Per Cubic Yard		
Hazardous Waste	\$170	
Non-Hazardous Waste	\$100	
Transportation Costs		
Per Drum	\$35	
Per Gallon	\$0.15	





## **SECTION VIII – FINANCIAL ASSURANCE**

## 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)**

**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.
2. Complete [Table VIII.B.](#) if requesting capacity expansion or new construction.
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).
4. For renewal applications with no capacity expansion, please complete and submit the attached Financial Disclosure Letter.

**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**

### **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.*

## **APPENDIX VIII**

### **FINANCIAL ASSURANCE**





## **FINANCIAL ASSURANCE PART B – SECTION VIII**

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
PERMIT RENEWAL APPLICATION FOR A HAZARDOUS WASTE  
STORAGE, PROCESSING, AND DISPOSAL FACILITY**

**HAZARDOUS WASTE PERMIT NO. 50025**

**DATE: SEPTEMBER 6, 2024**

**PREPARED FOR:**

**VOPAK LOGISTICS SERVICES USA, INC.  
VOPAK LOGISTICS SERVICES USA DEER PARK  
2759 INDEPENDENCE PARKWAY SOUTH  
DEER PARK, TEXAS 77536**

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## ATTACHMENTS

Attachment VIII.A.1 Financial Assurance for Closure

Attachment VIII.A.2 Liability Requirements

Attachment VIII.B.1 Financial Disclosure Statement

Attachment VIII.B.2 Press Release Fiscal Year 2023

## **1.0 INTRODUCTION**

The Financial Assurance document is prepared for the Vopak Logistics Services USA Deer Park facility located at 2759 Independence Parkway South, Deer Park, Texas 77536 (hereafter referred to as VLS or the facility). The Financial Assurance document has been prepared to demonstrate that the facility has sufficient financial resources to construct, safely operate, properly close and provide adequate liability coverage for the operations described in this permit renewal application in accordance with Title 40 of the Code of Federal Regulations (CFR) Part 264 Subpart H – Financial Requirements.

### **1.1 Basis**

In addition, the Financial Assurance document has been prepared in accordance with the requirements of Title 30 of the Texas Administrative Code (TAC) Chapter 305 Rule 44 as related to signature authority.

### **1.2 Purpose and Approach**

VLS is a distinct entity that is incorporated within the State of Texas. However, VLS is also a wholly owned subsidiary of Koninklijke Vopak N.V. In addition since VLS is wholly owned by Vopak Terminals North America Inc. via Vopak Terminals of Deer Park Inc..

## **2.0 FINANCIAL ASSURANCE INFORMATION**

### **2.1 Financial Assurance for Closure**

A copy of the current amended letter of credit is provided in Attachment VIII.A.1.

The dollar amount provided in the amended letter of credit is based on the updated closure cost estimate for the facility based on costs and inflation factors for 2023, and will be modified as needed on an annual basis.

### **2.2 Financial Assurance for Post-Closure Care**

Post-closure care is not applicable to the facility. The contingent cost closure estimate provided as part of the application is included with the closure cost estimate and is part of the amended letter of credit.

### **2.3 Liability Requirements**

A copy of the current certificate of liability insurance is provided in Attachment VIII.A.2.

## **3.0 APPLICANT FINANCIAL DISCLOSURE STATEMENT**

### **3.1 Financial Disclosure Statement**

The signed statement from an authorized signatory, in accordance with 30 TAC §305.44, is provided in Attachment VIII.B.1

### **3.2 Audited Financial Statements**

As indicated earlier, VLS is a wholly owned subsidiary of Koninklijke Vopak N.V. and as such does not have Audited Financial Statements. As indicated earlier also, and since VLS is wholly owned by Vopak Terminals North America Inc. via Vopak Terminals of Deer Park Inc..there are no specific tax returns for VLS.

### **3.3 SEC Forms 10-K and 10-Q**

This is not applicable to the facility since VLS is not a publicly traded company on the US Stock Exchange and, therefore, VLS is not required to file a 10-K. A press release that contains Vopak's 2023 financial results is Included in Attachment VIII.B.2.

**ATTACHMENT VIII.A.1**  
**FINANCIAL ASSURANCE FOR CLOSURE**

**Vopak North America Inc.**  
2759 Independence Parkway South  
P. O. Box 897  
Deer Park, TX 77536-0897  
United States  
Telephone 281-604-6000  
Fax 281-604-6147  
www.vopakamericas.com



JPMorgan Chase Bank  
712 Main St, Floor 7 North  
Mail code TX2-N397  
Houston Texas, 77002

Finance Department

**Via email:** [REDACTED]

Telephone direct  
281 254-4969

Fax direct  
281-604-6147

Date  
03 June 2025

E-mail direct  
[REDACTED]

Subject:  
Letter of Credit – I-439976

Dear Letters of Credit Service Team,

Please revise the amount of the Letter of Credit by +\$104,745.00. All other terms and conditions will remain the same:

L/C No.	New Amount	Beneficiary
I-439976	\$5,759,214.00	TX Commission on Environmental Quality

Please deliver the letter of credit amendment with the original wet ink signature, the amount of change, and the new ending balance via FedEx to the attention of Mark Stoebner with the TCEQ.

If you have any questions, please do not hesitate to call me.

Sincerely,

A handwritten signature in dark ink that reads 'Anna Chaka'.

Anna Chaka  
Vopak North America Inc.  
VP Finance & Procurement, USA & CA

JPMORGAN CHASE BANK, N.A.  
TRADE & WORKING CAPITAL  
10410 HIGHLAND MANOR DRIVE, FLOOR 03  
TAMPA, FL 33610-9128  
SWIFT: CHASUS33

To:  
VOPAK NORTH AMERICA INC.  
ATTN: FINANCE DEPARTMENT  
2759 INDEPENDENCE PARKWAY SOUTH  
DEER PARK, TX 77536-0897

Date: 09 Jun 2025  
Subject : Acknowledgement Advice for Standby Letter of Credit Amendment  
Our Reference : I-439976

Dear Sir/Madam,

Your Reference : PERMIT NO. HW50025  
Standby LC Reference : I-439976  
Account Party : VOPAK LOGISTICS SERVICES USA INC.  
2000 WEST LOOP SOUTH, SUITE 2200  
HOUSTON, TEXAS 77027-3597  
Beneficiary : TEXAS COMMISSION ON ENVIRONMENTAL  
QUALITY  
12100 PARK 35 CIRCLE, BLDG A MC-184  
AUSTIN, TEXAS 78753

As per your request we have issued our Irrevocable Standby Letter of Credit Amendment under our reference number stated above.

We hereby enclose the copy of the Irrevocable Standby Letter of Credit Amendment for your information and record purpose.

All inquiries regarding this transaction may be directed to our Client Service Group quoting our reference I-439976 using the following contact details:

Telephone Number: 1-800-634-1969

Email Address: [REDACTED]

Yours Faithfully,  
JPMorgan Chase Bank, N.A.,



---

Authorized Signature  
Tahir H Rana  
VP - Operations Manager



COPY OF STANDBY LETTER OF CREDIT AMENDMENT

TO: TEXAS COMMISSION ON ENVIRONMENTAL  
QUALITY  
12100 PARK 35 CIRCLE, BLDG A MC-184  
AUSTIN, TEXAS 78753

DATE : 09 Jun 2025  
SUBJECT : STANDBY LETTER OF CREDIT AMENDMENT  
OUR REFERENCE : I-439976

DEAR SIR/MADAM,

AMENDMENT NUMBER : 43  
ACCOUNT PARTY : VOPAK LOGISTICS SERVICES USA INC.  
2000 WEST LOOP SOUTH, SUITE 2200  
HOUSTON, TEXAS 77027-3597

WE HEREBY AMEND THE ABOVE REFERENCED STANDBY LETTER OF CREDIT AS FOLLOWS:

INCREASED BY : USD 104745.00

NEW LC VALUE : USD 5,759,214.00

ALL OTHER TERMS AND CONDITIONS OF THE STANDBY LETTER OF CREDIT REMAIN  
UNCHANGED.

All inquiries regarding this transaction may be directed to our Client Service Group quoting our reference  
I-439976 using the following contact details:

Telephone Number: 1-800-634-1969

Email Address: [REDACTED]

Yours Faithfully,  
JPMorgan Chase Bank, N.A.,



\_\_\_\_\_  
Authorized Signature  
Tahir H Rana  
VP - Operations Manager

END OF COPY

**ATTACHMENT VIII.A.2**  
**LIABILITY REQUIREMENTS**



# CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)  
09/10/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Aon Risk Services Southwest, Inc. Aon Risk Services Southwest, Inc Houston TX Office CA License # 0559715 5555 San Felipe, Suite 1500 Houston TX 77056 USA	<b>CONTACT NAME:</b> <b>PHONE</b> (A/C. No. Ext): (832) 476-6000 <b>FAX</b> (A/C. No.): (800) 953-4542 <b>E-MAIL ADDRESS:</b>														
<b>INSURED</b> Vopak North America, Inc. 2000 West Loop South Suite 1240 Houston TX 1240 USA	<table><tr><th>INSURER(S) AFFORDING COVERAGE</th><th>NAIC #</th></tr><tr><td>INSURER A: Lloyd's Syndicate No. 623</td><td>AA1126623</td></tr><tr><td>INSURER B:</td><td></td></tr><tr><td>INSURER C:</td><td></td></tr><tr><td>INSURER D:</td><td></td></tr><tr><td>INSURER E:</td><td></td></tr><tr><td>INSURER F:</td><td></td></tr></table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A: Lloyd's Syndicate No. 623	AA1126623	INSURER B:		INSURER C:		INSURER D:		INSURER E:		INSURER F:	
INSURER(S) AFFORDING COVERAGE	NAIC #														
INSURER A: Lloyd's Syndicate No. 623	AA1126623														
INSURER B:															
INSURER C:															
INSURER D:															
INSURER E:															
INSURER F:															

**COVERAGES** **CERTIFICATE NUMBER:** 570108112631 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS.

Limits shown as requested

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	<b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:						EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	
	<b>AUTOMOBILE LIABILITY</b> <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	
	<b>UMBRELLA LIAB</b> <input type="checkbox"/> OCCUR <b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION						EACH OCCURRENCE AGGREGATE	
	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below Y / N <input type="checkbox"/> N / A						PER STATUTE <input type="checkbox"/> OTH-ER <input type="checkbox"/> E.L. EACH ACCIDENT E.L. DISEASE-EA EMPLOYEE E.L. DISEASE-POLICY LIMIT	
A	Environmental Site Liability			W1CA33230501 Claims Made	10/01/2023	10/01/2025	Occurrence Aggregate Deductible	\$10,000,000 \$10,000,000 \$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Claims Made - see attached addendum.

## CERTIFICATE HOLDER

Vopak North America, Inc.  
2000 West Loop South, Suite 2200  
Houston TX 77027 USA

## CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

*Aon Risk Services Southwest, Inc.*

Holder Identifier :

570108112631

Certificate No :





AGENCY CUSTOMER ID: 570000011237

LOC #:

**ADDITIONAL REMARKS SCHEDULE**

Page \_ of \_

AGENCY Aon Risk Services Southwest, Inc.		NAMED INSURED Vopak North America, Inc.	
POLICY NUMBER See Certificate Numbe 570108112631		EFFECTIVE DATE:	
CARRIER See Certificate Numbe 570108112631	NAIC CODE		

**ADDITIONAL REMARKS****THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,****FORM NUMBER:** ACORD 25 **FORM TITLE:** Certificate of Liability Insurance

Retroactive Date

Applicable Retroactive Date, if any, set forth below:

Location

a) Per schedule in the excel file titled "Vopak NODS.xlsx" submitted to and on file with the Underwriters.

Retroactive Date: None.

b) 1910 Highland Shores Road, Highland, Texas 77562.

Retroactive Date: January 10, 2020.

c) Per schedule in the excel file titled "2021-Vopak NODS - US SR.xlsx" submitted to and on file with the Underwriters.

Retroactive Date: None.

d) Per schedule in the excel file titled "19-21 - Vopak NODS - US WC.xlsx" submitted to and on file with the Underwriters.

Retroactive Date: None.

e) Per schedule in the excel file titled "2023-Vopak NODS xlsx" submitted to and on file with the Underwriters".

Retroactive Date: None.

**ATTACHMENT VIII.B.1**  
**FINANCIAL DISCLOSURE STATEMENT**

September 11, 2024

Mr. Robert Patton, Jr.  
Manager, Industrial and Hazardous Waste Permits Section  
Texas Commission on Environmental Quality  
Building F, MC 130  
12100 Park 35 Circle  
Austin, Texas 78753

Re: Financial Disclosure Letter for Vopak Logistics Services USA, Inc.  
Permit Renewal  
Hazardous Waste Permit No. 50025  
Industrial Solid Waste Registration No. 30567  
EPA ID No. TXD097673149  
RN100223007; CN601527955

Dear Mr. Patton:

This letter is furnished to you in response to financial disclosure requirements as applicable under Texas Health and Safety Code Section 361.085 and Title 30, Texas Administrative Code (30 TAC), Section 305.50 to provide assurance that Vopak Logistics Services USA, Inc. has sufficient financial resources.

In keeping with the above law and rule requirements I hereby certify that Vopak Logistics Services USA, Inc. is adequately capitalized and has sufficient financial resources to operate, close, provide post-closure care for and perform corrective action for the above-referenced facility in a safe manner, and in compliance with the permit and all applicable rules.

Vopak Logistics Services USA, Inc. currently provides, as financial assurance mechanism as set out in 30 TAC, Chapter 37, Subchapter C to meet Vopak Logistics Services USA, Inc.'s financial assurance obligations the following: letter of credit.

I am authorized to make these statements on behalf of Vopak Logistics Services USA, Inc.. I understand that the TCEQ may request additional information as part of their review.

Sincerely,



Gary Jackson  
SHEQ Director – Vopak US & Canada

*[Note: signatory must be person whose title and job responsibilities meet the requirements in 30 TAC § 305.44]*

**ATTACHMENT VIII.B.2**  
**PRESS RELEASE FISCAL YEAR 2023**

# Vopak reports strong FY 2023 results, announces substantial progress on strategy execution and increases shareholder distribution

## Key highlights FY 2023

### Improve

- EBITDA in FY2023 increased to EUR 964 million, proportional EBITDA to EUR 1,154 million and operating cash return to 14%
- Reduced our CO<sub>2</sub> footprint by 25% compared to our baseline of 2021 and further improved our safety performance
- Actively managed our portfolio with strategic divestments completed and EUR 523 million proceeds received
- EPS increased by 40% to EUR 3.29, dividend of EUR 1.50 per share announced, a 15% increase compared to 2022 and up to EUR 300 million to be returned to shareholders via a share buyback program

### Grow

- Expanded our open access LNG capacity in the Netherlands to support energy security
- Strengthened our leading position in India
- Solidified our leading industrial terminal position with investments in Singapore, China and the United States

### Accelerate

- Commissioned repurposed infrastructure in the United States and Singapore for low-carbon transportation fuels
- Expanded capacity in the Netherlands and Brazil for feedstock for low-carbon transportation fuels
- Entered into the electricity storage sector in the United States, expected to be operational in the course of 2024

Q4 2023	Q3 2023	Q4 2022	In EUR millions	2023	2022
352.8	352.0	355.3	Revenues	1,425.6	1,367.0
<b>Results-excluding exceptional items-</b>					
228.8	240.5	227.8	Group operating profit / (loss) before depreciation and amortization (EBITDA)	963.5	887.2
150.2	158.2	150.3	Group operating profit / (loss) (EBIT)	640.5	547.3
109.0	97.3	88.5	Net profit / (loss) attributable to holders of ordinary shares	412.9	294.4
0.87	0.77	0.71	Earnings per ordinary share (in EUR)	3.29	2.35
<b>Results-including exceptional items-</b>					
187.6	286.5	226.2	Group operating profit / (loss) before depreciation and amortization (EBITDA)	1,014.5	424.0
109.0	204.2	148.7	Group operating profit (loss) (EBIT)	691.5	84.1
87.4	144.2	86.9	Net profit / (loss) attributable to holders of ordinary shares	455.7	-168.4
0.69	1.15	0.70	Earnings per ordinary share (in EUR)	3.63	-1.34
219.4	240.2	316.9	Cash flows from operating activities (gross excluding derivatives)	899.5	897.9
219.7	245.6	341.2	Cash flows from operating activities (gross)	943.1	872.1
247.4	- 111.8	- 100.7	Cash flows from investing activities (including derivatives)	109.6	- 489.4
<b>Additional performance measures</b>					
282.3	285.4	269.6	Proportional EBITDA -excluding exceptional items-	1,154.0	1,067.8
20.6	22.0	22.1	Proportional capacity end of period (in million cbm)	20.6	22.1
91%	92%	90%	Proportional occupancy rate	91%	88%
35.2	36.4	36.6	Storage capacity end of period (in million cbm)	35.2	36.6
91%	91%	90%	Subsidiary occupancy rate	91%	87%
12.8%	14.1%	9.3%	Proportional operating cash return	14.0%	11.4%
11.7%	12.2%	10.6%	Return on Capital Employed (ROCE)	12.3%	9.8%
5,058.8	5,068.5	5,319.4	Average capital employed	5,106.3	5,408.1
2,286.4	2,698.8	3,050.8	Net interest-bearing debt	2,286.4	3,050.8
1.80	2.09	2.65	Senior net debt : EBITDA	1.80	2.65
1.99	2.27	2.85	Total net debt : EBITDA	1.99	2.85



## CEO statement

"I am proud to look back on a successful 2023. Our team at Vopak delivered on our strategic priorities and with our well-diversified terminal portfolio, we are supporting the world's need for energy security and the ongoing energy transition. We made good progress on our strategy to improve our financial and sustainability performance. Organic growth across most of the business units led to a healthy proportional occupancy of 91% and EBITDA of EUR 964 million which is a record result for Vopak leading to a 9% year-on-year increase. We were able to also increase the EBITDA margin by 2 percentage points. On safety, our first priority, we further improved our personal safety and maintained a very good process safety performance.

We successfully completed the divestment of three chemical terminals in Rotterdam, the Netherlands and a chemical distribution terminal in Savannah, United States. We continued to grow our base in industrial and gas terminals with expansion in China, United States, India and the Netherlands. We are progressing well in accelerating towards new energies and sustainable feedstocks, by commissioning repurposed infrastructure as well as expanding the capacity for feedstock for low-carbon transportation fuels. We made our first investment into electricity storage infrastructure in the United States. Due to our robust financial position and strong portfolio cash generation, we are increasing shareholder distribution by a combination of growing dividends by 15% compared to 2022 and a share buyback program of up to EUR 300 million."

## Financial Highlights for FY 2023 -excluding exceptional items-

**Revenue** increased to EUR 1,426 million (FY 2022: EUR 1,367 million) driven by favorable storage demand in all markets which more than compensated for the divestment impact of EUR 37 million and unfavorable currency translation effects of EUR 26 million. In addition, growth projects further supported revenue.

**Proportional revenue** increased to EUR 1,942 million (FY 2022: EUR 1,857 million).

During 2023 the volatility in the oil market, rebalancing of trade flows and supply security concerns supported overall storage demand in the main hub locations. Chemical markets were characterized by oversupply, suppressed China consumption as well as declining margins and operating rates. However the demand for storage was stable. Throughput levels in our industrial terminals remained firm. Gas markets (LNG) settled in 2023 after the disruption caused by the Russia - Ukraine war.

**Subsidiary occupancy** rate at FY 2023 was 91% (FY 2022: 87%). **Proportional occupancy** rate at FY 2023 increased to 91% (FY 2022: 88%) mainly due to

improved occupancy in Asia & Middle East, Singapore and the Netherlands business units.

**Costs** were broadly stable at EUR 717 million (FY 2022: EUR 713 million) as the cost control measures and favorable divestment and currency translation impacts offset increased personnel expenses and higher operating expenses, including the cost of growth projects. **Proportional costs** increased by EUR 11 million to EUR 905 million (FY 2022: EUR 894 million).

**EBITDA** increased by EUR 77 million (9% year-on-year) to EUR 964 million (FY 2022: EUR 887 million) as a result of favorable storage demand across the different markets and geographies while keeping costs broadly stable and offsetting the divestment impact (EUR 6 million) as well as negative currency translation effects (EUR 23 million). Compared to Q3 2023 (EUR 241 million), EBITDA (Q4 2023: EUR 229 million) decreased due to the divestment impact of three chemical terminals in Rotterdam (EUR 6 million), higher costs and lower results from joint ventures, partly offset by growth project contributions.

**Proportional EBITDA** increased by EUR 86 million (8% year-on-year increase) to EUR 1,154 million (FY 2022: EUR 1,068 million). **Proportional EBITDA margin** in FY 2023 was 56% (FY 2022: 54%) an improvement reflecting good business conditions and our commercial ability to pass on inflationary and exceptional energy costs during the year.

**EBIT** increased by EUR 94 million (17% year-on-year) to EUR 641 million (FY 2022: EUR 547 million) mainly due to improved EBITDA performance, lower depreciation and higher results from joint ventures.

**Growth investments** in 2023 were EUR 247 million excluding any net cash received (FY 2022: EUR 313 million). Proportional growth investments in 2023 were EUR 299 million (FY 2022: EUR 349 million).

**Operating capex**, which includes sustaining and IT capex, decreased by EUR 36 million to EUR 255 million (FY 2022: EUR 291 million) due to divestment impact and lower spend compared to last year. **Proportional operating capex** was EUR 290 million (FY 2022: EUR 315 million).

**Cash flow from operating activities** increased by EUR 71 million to EUR 943 million compared to FY 2022 EUR 872 million (8% year-on-year). The increase was related mainly to positive business performance (increase of EUR 54 million) and settlement of derivatives (increase of EUR 69 million). This was partially offset by lower dividend receipts from joint ventures and associates (decrease of EUR 34 million).

**Proportional operating cash flow** in FY 2023 increased by EUR 111 million (16% year-on-year) to EUR 795 million (FY 2022 EUR 684 million) driven mainly by improved proportional EBITDA performance, partly offset by a negative currency translation impact.

**Proportional operating cash return** in FY 2023 was 14.0% compared to 11.4% in FY 2022. The increase was mainly due to higher EBITDA contribution and lower average capital employed compared to last year.

**Total impairment charges** in FY 2023 were EUR 31 million offset by the reversal of impairments of EUR 54 million (FY 2022: charge of EUR 449 million).

**Net profit attributable to holders of ordinary shares** -excluding exceptional items- was EUR 413 million (FY 2022: EUR 294 million). FY 2023 Earnings per share (EPS) -excluding exceptional items- continued to

improve, FY 2023 EPS was EUR 3.29 (40% year-on-year) compared to EUR 2.35 in FY 2022.

**The total net debt : EBITDA ratio** is 1.99x at the end of 2023 compared to 2.85x at the end of 2022 and 2.27x at the end of Q3 2023. Our ambition is to keep total net debt to EBITDA in the range of around 2.50-3.00x.

### Shareholder distribution

Successful execution of our strategy has led to a robust financial position which allows us to increase the dividend and the start of a share buyback program.

- **Proposed dividend** of EUR 1.50 (2022: EUR 1.30) per ordinary share, payable in cash, will be proposed at the Annual General Meeting on 24 April 2024. This represents an increase of 15% compared to 2022, in line with Vopak's stable to progressive dividend policy which aims to maintain or grow the annual dividend subject to market conditions.
- **Share buyback program** of up to EUR 300 million. Today we announce the share buyback program that will start on 15 February 2024 and will run until the end of 2024, barring unforeseen circumstances.

### Exceptional items in Q4 2023 consist of:

- Divestment loss of EUR 5 million following the sale of three chemical terminals in Rotterdam (Botlek, TTR and Chemiehaven) in November 2023.
- Organizational restructuring charges of EUR 6 million (YTD Q3 2023: EUR 11 million) for changes in management structure in line with Vopak's strategic goals mainly include employee termination benefits and advisory costs.
- Impairment of a partially constructed jetty in China in the amount of EUR 22 million. Vopak has decided not to pursue the completion of the jetty which has started in 2018 due to lack of feasibility of this LNG project.
- On 2 February 2024, Vopak signed a sale and purchase agreement to sell its 60% share (42% economic share) in chemical distribution terminal Shandong Lanshan, China which led to an impairment of EUR 9 million upon classification as asset held for sale.
- Income tax gain of EUR 16 million related to the net income tax effects on the exceptional items.
- For the full financial year 2023 exceptional items overview, reference is made to the Financial Statement section in the Annual Report.

# Strategic update

The deployment of growth capex towards our strategic goals is going well with growth in industrial and gas and an acceleration towards new energies and sustainable feedstocks. A summary of the progress during 2022 and 2023:

## Projects that Vopak has taken a Final Investment Decision on since June 2022

Name, Country	Share (%)	Capacity	COD <sup>1</sup>	Equity Investment and Capex spend (EUR million) <sup>2</sup>	Proportional Growth Capex (EUR million)
<b>Improve financial and sustainability performance</b>					
Eurotank, Belgium	100%	41k cbm	Q4 2024	70	70
Deer Park, United States	100%	75k cbm	HY1 '24/ Q1 '26	58	58
Sydney, Australia	100%	Pipeline	Q4 2024	3	3
<b>Total</b>				<b>131</b>	<b>131</b>

<b>Grow the base in industrial and gas terminals</b>					
Aegis Vopak Terminals, India <sup>3</sup>	49%	1.3m cbm	Q2 2022	174	225
Caojing, China	50%	110k cbm	Q1 2025	-	50
Aegis Vopak Terminals, India	49%	349k cbm	2025	95	95
Banyan Terminals, Singapore	70%	Pipeline	HY1 2025	15	11
Gate Terminal, the Netherlands	50%	180k cbm	HY2 2026	26	175
Europoort Terminal, the Netherlands	100%	Pipeline	Q4 2023	5	5
Eemshaven Terminal, the Netherlands	50%	196k cbm	Q4 2023	80	80
Freeport Terminal, United States	50%	14k cbm	H2 2025	5	37
Aegis Vopak Terminals, Mumbai, India	49%	102k cbm	Q4 2024	12	12
Haiteng Terminal, China	30%	20k cbm	Q2 2026	7	7
SPEC, Colombia	49%	BOG	2025	10	10
<b>Total</b>				<b>429</b>	<b>707</b>

<b>Vopak's ambition to invest in growing the base in industrial and gas by 2030</b>	<b>1 Billion</b>	<b>&gt;1 Billion</b>
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<b>Accelerate towards new energies and sustainable feedstocks</b>					
Los Angeles, United States	100%	148k cbm	Q3 2023	30	30
Vopak Energy Park Antwerp, Belgium	100%	NA	TBC	-	-
Alemoa, Brazil	100%	30k cbm	2024	2	2
Vlaardingen, the Netherlands	100%	34k cbm	Q4 2024	10	10
Energy Storage Texas, United States	50%	10MWh	Q1 2024	9	9
<b>Total</b>				<b>51</b>	<b>51</b>

<b>Vopak's ambition to invest in accelerate towards new energies and sustainable feedstocks by 2030</b>	<b>1 Billion</b>	<b>&gt;1 Billion</b>
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<sup>1</sup> Commercial operation date

<sup>2</sup> The investment amount in EUR is excluding capitalized interest

<sup>3</sup> Vopak announced its intention to form a joint venture with Aegis in June 2021, and the completion of this transaction was in May 2022.

Vopak uses the following methodology in defining the operating cash return; the operating cash return is "in line" with company operating cash return target if the project return is around 12%; "accretive" to company operating cash return target if the return is between 12% and 15% and "attractive" if the return is above 15%.

## Improve

**In the Netherlands,** Vopak completed the sale of its three chemical terminals in Rotterdam (Botlek, TTR and Chemiehaven) in November 2023 for a total sales price of EUR 407 million including a conditional deferred consideration of EUR 19.5 million and completion purchase price adjustments of EUR 6.5 million. Total cash receipt net of transaction costs and net debt items at closing was EUR 370 million. The negative impact of this divestment for Q4 2023 was around EUR 6 million in EBITDA while the total contribution for the period January-November 2023 was EUR 70 million.

**In Colombia,** Vopak has discontinued the divestment process for its two chemical terminals Barranquilla and Cartagena.

**In China,** on 2 February 2024, Vopak signed a sale and purchase agreement to sell its 60% share (42% economic interest) in chemical distribution terminal Shandong Lanshan, China with expected divestment proceeds of EUR 15 million. This divestment is in line with Vopak's commitment to reduce exposure towards chemical distribution terminals.

## Grow in industrial and gas

**In the United States,** Vopak with its joint venture partner, Blackrock, is expanding its Vopak Industrial Infrastructure Americas terminals. The total investment of EUR 37 million (USD 38 million) and Vopak share of EUR 5 million consists of repurposing and building new capacity for a total of 14 thousand cbm at the Vopak Freeport terminal.

The expansion will support Dow's Propylene Oxide business and its processing unit in Freeport. The new capacity which is expected to be operational in H2 2025 is contracted under a long-term agreement with Dow Chemical and is expected to be accretive to Vopak's total cash return.

**In India,** Aegis Vopak Terminals, which is Vopak's joint venture with Aegis, is strengthening its leading position through a new location in Jawaharlal Nehru Port, Mumbai. The investment consists of 102 thousand cbm storage capacity. Vopak's share of investments in this growth project is expected to be around EUR 12 million. The project is expected to be commissioned in Q4 2024.

The growth project will have a positive impact on the operating cash return of the joint venture and is expected to be in line with Vopak's operating cash return upon finalization.

**In China,** Vopak is strengthening its leadership position in industrial terminals by taking a Final Investment Decision of EUR 25 million, of which Vopak's share is EUR 7 million, to expand the Haiteng terminal.

The new investment consists of 20 thousand cbm of storage and pipeline connections with the customer's flexible feed cracker.

This investment is underpinned by a 20-year commercial agreement and will provide attractive operating cash returns upon its commission in Q2 2026.

**In Colombia,** SPEC, the joint venture of Vopak and Promigas, has started the construction of a Boil-Off Gas (BOG) compressor which will reduce CO<sub>2</sub> emissions of the terminal by around 50%.

The total investment is approximately EUR 20 million, of which Vopak's share will be approximately EUR 10 million. The construction is expected to be finalized in 2025.

Total current Scope 1 and 2 CO<sub>2</sub> emissions of SPEC are ~95k MT and represent approximately 20% of Vopak's total current emissions.

**In the Netherlands,** Europoort terminal recently renewed a long-term commercial agreement, further extending its industrial service offering. More than 30% of the terminal capacity is servicing industrial activity of the Port of Rotterdam. Simultaneously, we are gradually taking oil capacity out of service and exploring opportunities to repurpose that land for new energy opportunities with a focus on marine, aviation and petchem feedstocks.

**In the Netherlands,** Vopak completed the acquisition of 50% of the shares in the EemsEnergy Terminal in November 2023. The LNG import terminal of 8 billion cubic meters (bcm) has been operational since September 2022. This investment will provide an attractive operating cash return.

## Accelerate towards new energies & sustainable feedstocks

**In Brazil,** Vopak is repurposing 30 thousand cbm of existing storage capacity in Alemoa for renewable feedstock that will support the production of renewable road and jet fuel in the customer plant for a total investment of EUR 2 million. This capacity is underpinned by a long-term commercial agreement and will provide an attractive cash return to Vopak. With these investments, Vopak is well positioned to be the market leader in the renewable feedstocks storage market within Brazil.

**In the Netherlands,** Vopak has taken Final Investment Decision (FID) to repurpose 6 tanks (34 thousand cbm) for sustainable biofuel feedstocks at the Vlaardingen terminal. Investment will be around EUR 10 million and upon commissioning in Q4 2024 is expected to provide an attractive operating cash return. The total biofuel feedstock capacity of Vlaardingen will reach around 190 thousand cbm and the terminal is well-positioned to capture opportunities in a rapidly growing market.

**In the United States,** Vopak is investing EUR 9 million in new infrastructure for electricity storage. With this investment Vopak will own and operate two stand-alone lithium-ion Battery Energy Storage Systems (BESS) near Houston, Texas.

In Q1 2024, the 10 MWh project is expected to be placed into service and Vopak will begin construction of the 20 MWh project, placing it into service in Q4 2024.

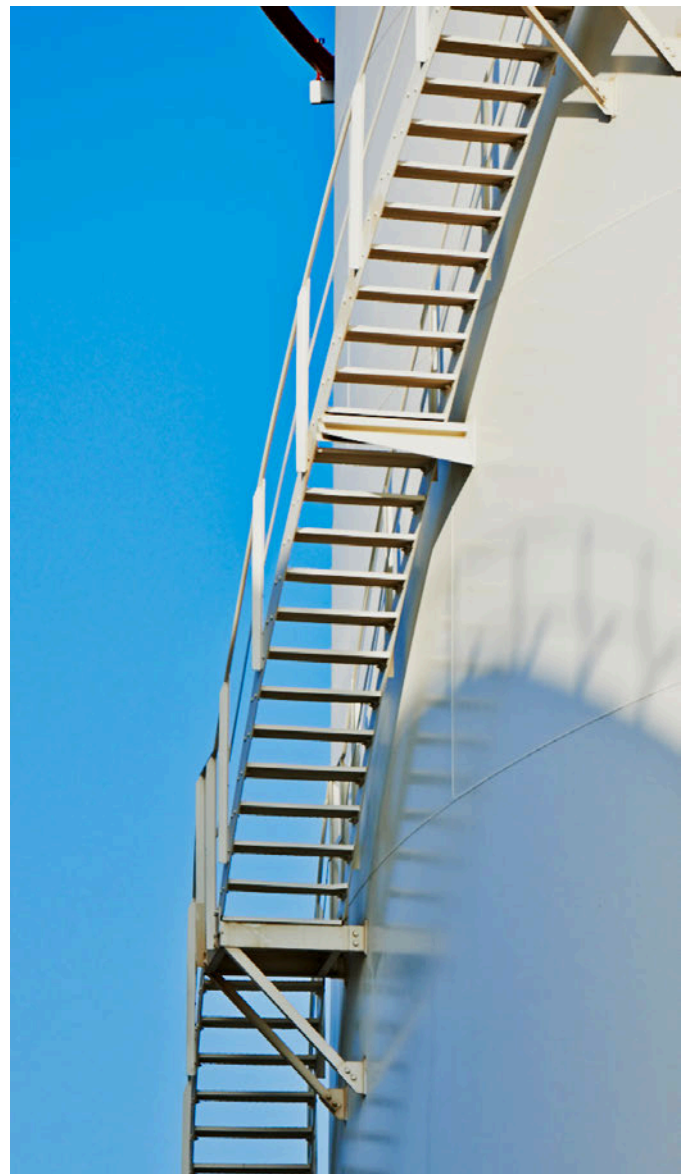
This project marks Vopak's first entry into electricity storage in the US. This is an important development in executing Vopak's strategy to accelerate towards new energies.

**In Belgium,** Vopak is progressing well in redeveloping the land in the Port of Antwerp-Bruges at its Vopak Energy Park Antwerp terminal. Most of the refinery has been demolished, with the remaining infrastructure to be demolished during 2024 as we progress to the next phase to redevelop the site to support renewable energy.

**In Japan,** Vopak signed a Memorandum of Understanding with IHI. The collaboration focuses on strategically positioned, large-scale ammonia storage terminals for economical distribution of low-carbon ammonia.

**In Singapore,** Vopak Terminals Singapore and the Agency for Science, Technology and Research (A\*STAR) have signed a Memorandum of Understanding to explore research opportunities in low carbon energy solutions, including addressing current challenges associated with hydrogen and ammonia.

**In Singapore,** Vopak completed the repurposing of 40 thousand cbm capacity at Sebarok terminal for blending of biofuels into marine fuels. The existing pipeline system was also converted to a dedicated biofuel blending service. The new capacity, which is underpinned by customer commitment, will provide an attractive operating cash return.





# Outlook for FY 2024

	FY 2023 adjusted for divestments	2024 Outlook
Proportional EBITDA (excl. exceptional items)	EUR 1,079 million	EUR 1,120 - 1,170 million
Consolidated EBITDA (excl. exceptional items)	EUR 888 million	EUR 880- 920 million

*Adjustment of FY 2023 Actuals refer to the divestment impact of three chemical terminals in Rotterdam (Botlek, TTR and Chemiehaven), and Savannah terminal in the United States.*

**Proportional EBITDA** -excluding exceptional items- outlook for FY 2024 is expected to be in the range of **EUR 1,120 million and EUR 1,170 million**. This outlook factors in the impact of divestments completed in 2023, uncertainty and volatility in storage demand indicators across the business. Vopak's assumptions for EUR/USD is 1.08 and for EUR/SGD 1.45

**EBITDA** -excluding exceptional items- outlook for FY 2024 is expected to be in the range **EUR 880 million to EUR 920 million**. This outlook factors in the impact of divestments completed in 2023, uncertainty and volatility in storage demand indicators across the business. Vopak's assumptions for EUR/USD is 1.08 and for EUR/SGD 1.45.

	2024 Outlook
Consolidated growth capex	Around EUR 300 million
Consolidated operating capex	Around EUR 230 million

**Consolidated growth investments** outlook for FY 2024 is expected to be **around 300 million**. This is subject to currency exchange movements, additional discretionary decisions, policy changes and regulatory environment. This outlook is in line with Vopak's long-term commitment to invest EUR 1 billion in industrial and gas terminals by 2030 and EUR 1 billion in new energies and sustainable feedstocks.

The allocation of these investments will be through existing committed and new business development projects.

**Consolidated operating capex** outlook for FY 2024 which includes sustaining and IT capex is expected to be **around EUR 230 million** subject to currency exchange movements, additional discretionary decisions, policy changes and the regulatory environment.

**Proportional operating cash return** long-term outlook remains unchanged at above 12%. The outlook is subject to market conditions and currency exchange movements.



## Executive Board changes

On December 19, the Supervisory Board of Royal Vopak announced that Vopak's COO and member of the Executive Board Frits Eulderink will step down as per the next AGM on 24 April 2024. Frits will remain available and continue to contribute to Vopak's strategy execution and among others certain ESG and energy transition projects until June 2025.

The Executive Board will continue after 24 April 2024 as a two-person board consisting of the CEO, Dick Richelle and CFO, Michiel Gilsing. The Supervisory Board is confident that in the new organizational structure, the experience and capabilities of Dick and Michiel will further drive Vopak's progress on the strategy execution and capture energy transition opportunities in the years to come.

## Supervisory Board proposed changes

During the Annual General Meeting to be held on 24 April 2024, there will be a proposal to appoint Mr. Richard L. de Visser as member of the Supervisory Board. As per the same date, Mr. Mel F. Groot will step down from the Supervisory Board.

Richard de Visser is a Director at HAL Investment and is an experienced executive with a deep understanding of strategic and financial management and business development. His capabilities, knowledge and experience in managing and investing in internationally operating companies are valuable personal attributes and this will further support the Supervisory Board and bring in additional expertise. Richard holds the position of Supervisory Board member at MSPS Holding BV.

The Executive Board and the Supervisory Board extend their sincere gratitude to Mel for his valuable contributions to Vopak during his period as Vice-chair of the Supervisory Board. The extensive business, financial and governance experience of Mel was highly valuable to Vopak over the last decade.

The formal notice of the Annual General Meeting, the agenda and the shareholders circular will become available on the Vopak website in due course.

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### Financial calendar

24 April 2024	Publication of 2024 Q1 interim update
24 April 2024	Annual General Meeting
26 April 2024	Ex-dividend quotation
29 April 2024	Dividend record date
3 May 2024	Dividend payment date
26 July 2024	Publication of 2024 half-year results

## Disclaimer

Any statement, presentation or other information contained herein that relates to future events, goals or conditions is, or should be considered, a forward-looking statement. Although Vopak believes these forward-looking statements are reasonable, based on the information available to Vopak on the date such statements are made, such statements are not guarantees of future performance and readers are cautioned against placing undue reliance on these forward-looking statements. Vopak's outlook does not represent a forecast or any expectation of future results or financial performance.

The actual future results, timing and scope of a forward-looking statement may vary subject to (amongst others) changes in laws and regulations including international treaties, political and foreign exchange developments, technical and/or operational capabilities and developments, environmental and physical risks, (energy) resources reasonably available for our operations, developments regarding the potential capital raising, exceptional income and expense items, changes in the overall economy and market in which we operate, including actions of competitors, preferences of customers, society and/or the overall mixture of services we provide and products we store and handle.

Vopak does not undertake to publicly update or revise any of these forward-looking statements.

**About Royal Vopak**

Royal Vopak helps the world flow forward. At ports around the world, we provide storage and infrastructure solutions for vital products that enrich everyday life. These products include liquids and gases that provide energy for homes and businesses, chemicals for manufacturing products, and edible oils for cooking. For all of these, our worldwide network of terminals supports the global flow of supply and demand.

For more than 400 years, Vopak has been at the forefront of fundamental transformations. With a focus on safety, reliability, and efficiency, we create new connections and opportunities that drive progress. Now more than ever, our talented people are applying this mindset to support the energy transition. Together with our partners and customers, we are accelerating the development of infrastructure solutions for hydrogen, ammonia, CO<sub>2</sub>, long-duration energy storage, and low-carbon fuels & feedstocks – paving the way to a more sustainable future.

Vopak is listed on the Euronext Amsterdam and is headquartered in Rotterdam, the Netherlands. For more information, please visit [www.vopak.com](http://www.vopak.com)

**For more information please contact:**

Vopak Press: Liesbeth Lans - Manager External Communication, e-mail: [REDACTED]

Vopak Analysts and Investors: Fatjona Topciu - Head of Investor Relations, e-mail: [REDACTED]

The analysts' presentation will be given via an on-demand audio webcast on Vopak's corporate website, starting at 10:00 AM CET on 14 February 2024.

**Auditor's involvement**

This press release and enclosures are based on the 2023 financial statements. The financial statements are published in accordance with statutory provisions. The auditor has issued an unqualified auditor's report on the Financial Statements. For further information please refer to Vopak's 2023 Annual Report [here](#).

This press release contains inside information as meant in clause 7 of the Market Abuse Regulation. The content of this report has not been audited or reviewed by an external auditor.

**Enclosures:**

1. Key figures
2. Notes to the results per Business Unit
3. Consolidated financial statements
  - a. Consolidated Statement of Income
  - b. Consolidated Statement of Comprehensive Income
  - c. Consolidated Statement of Financial Position
  - d. Consolidated Statement of Changes in Equity
  - e. Consolidated Statement of Cash Flows
  - f. Segmentation
  - g. Overview of exceptional items
4. Non-IFRS proportional financial information
5. Vopak key results Q4 2023



## Enclosure 1: Key figures

	2023	2022
<b>Safety performance</b>		
Total Injury Rate (TIR), own employees and contractors (per 200,000 hours worked)	0.16	0.25
Lost Time Injury Rate (LTIR), own employees and contractors (per 200,000 hours worked)	0.08	0.12
Process Safety Events Rate (PSER), own employees and contractors (per 200,000 hours worked)	0.09	0.11
<b>Financial performance (in EUR millions)</b>		
Revenues	1,425.6	1,367.0
Group operating profit / (loss) before depreciation and amortization (EBITDA)	1,014.5	424.0
Group operating profit / (loss) before depreciation and amortization (EBITDA) -excluding exceptional items-	963.5	887.2
Group operating profit / (loss) (EBIT)	691.5	84.1
Group operating profit / (loss) (EBIT) -excluding exceptional items-	640.5	547.3
Net profit / (loss) attributable to holders of ordinary shares	455.7	-168.4
Net profit / (loss) attributable to holders of ordinary shares -excluding exceptional items-	412.9	294.4
Cash flows from operating activities (gross excluding derivatives)	899.5	897.9
Cash flows from operating activities (gross)	943.1	872.1
Cash flows from investing activities (including derivatives)	109.6	- 489.4
Average capital employed	5,106.3	5,408.1
Return On Capital Employed (ROCE)	12.3%	9.8%
Return On Equity (ROE)	13.3%	9.5%
EBITDA margin excluding result of joint ventures and associates	51.1%	49.3%
<b>Capital and financing (in EUR millions)</b>		
Equity attributable to owners of parent	3,223.2	2,984.7
Net interest-bearing debt	2,286.4	3,050.8
Senior net debt : EBITDA	1.80	2.65
Total net debt : EBITDA	1.99	2.85
Interest cover (EBITDA : net finance costs)	8.4	8.4
<b>Key figures per ordinary share (in EUR)</b>		
Basic earnings	3.63	-1.34
Basic earnings -excluding exceptional items-	3.29	2.35
Diluted earnings	3.62	-1.34
Diluted earnings -excluding exceptional items-	3.28	2.34
Basic weighted average number of ordinary shares	125,443,835	125,395,678
Total number of ordinary shares outstanding end of period	125,740,586	125,740,586
(Proposed) dividend	1.50	1.30
<b>Business performance</b>		
Storage capacity end of period(in million cbm)	35.2	36.6
- subsidiaries	16.0	17.6
- joint ventures and associates	15.3	15.1
- operatorships	3.9	3.9
Occupancy rate subsidiaries	91%	87%
Total number of employees end of period (in FTE)	5,505	5,696
Contracts > 3 years (as % of revenues)	52%	52%
Contracts > 1 year (as % of revenues)	92%	88%
<b>Information on proportional basis</b>		
Proportional EBITDA -excluding exceptional items-	1,154.0	1,067.8
Proportional capacity end of period (in million cbm)	20.6	22.1
Proportional occupancy rate	91%	88%
Net interest-bearing debt	3,585.3	4,208.7
Sustaining, service improvement and IT capex	289.7	314.9
Proportional operating cash return	14.0%	11.4%
<b>Exchange rates (per EUR 1.00)</b>		
Average US dollar	1.08	1.05
US dollar end of period	1.11	1.07
Average Singapore dollar	1.45	1.45
Singapore dollar end of period	1.46	1.43

## Enclosure 2: Notes to the results per Business Unit

### Asia & Middle East

In EUR millions	2023	2022
Revenues	75.2	76.2
<i>Results -excluding exceptional items-</i>		
Group operating profit / (loss) before depreciation and amortization (EBITDA)	133.3	134.8
Group operating profit / (loss) (EBIT)	113.8	115.0
<i>Results -including exceptional items-</i>		
Group operating profit / (loss) before depreciation and amortization (EBITDA)	131.6	134.0
Group operating profit / (loss) (EBIT)	112.1	114.2
Proportional EBITDA -excluding exceptional items-	260.6	251.3
Proportional occupancy rate	92%	87%
Storage capacity end of period (in million cbm)	12.1	12.1
Subsidiary occupancy rate	93%	87%
Average capital employed	936.9	912.3

### China & North Asia

In EUR millions	2023	2022
Revenues	45.2	51.5
<i>Results -excluding exceptional items-</i>		
Group operating profit / (loss) before depreciation and amortization (EBITDA)	67.0	68.7
Group operating profit / (loss) (EBIT)	54.0	55.9
<i>Results -including exceptional items-</i>		
Group operating profit / (loss) before depreciation and amortization (EBITDA)	35.4	68.7
Group operating profit / (loss) (EBIT)	22.4	55.9
Proportional EBITDA -excluding exceptional items-	98.5	97.5
Proportional occupancy rate	83%	85%
Storage capacity end of period (in million cbm)	3.2	3.2
Subsidiary occupancy rate	68%	73%
Average capital employed	455.9	478.0

## Netherlands

In EUR millions	2023	2022
Revenues	458.9	428.6
<i>Results -excluding exceptional items-</i>		
Group operating profit / (loss) before depreciation and amortization (EBITDA)	289.0	234.9
Group operating profit / (loss) (EBIT)	192.4	121.2
<i>Results -including exceptional items-</i>		
Group operating profit / (loss) before depreciation and amortization (EBITDA)	338.6	-183.8
Group operating profit / (loss) (EBIT)	242.0	-297.5
Proportional EBITDA -excluding exceptional items-	340.4	282.4
Proportional occupancy rate	91%	86%
Storage capacity end of period (in million cbm)	8.2	9.4
Subsidiary occupancy rate	91%	86%
Average capital employed	1,158.3	1,208.5

## Singapore

In EUR millions	2023	2022
Revenues	285.2	252.6
<i>Results -excluding exceptional items-</i>		
Group operating profit / (loss) before depreciation and amortization (EBITDA)	210.9	184.1
Group operating profit / (loss) (EBIT)	154.2	128.3
<i>Results -including exceptional items-</i>		
Group operating profit / (loss) before depreciation and amortization (EBITDA)	210.7	184.1
Group operating profit / (loss) (EBIT)	154.0	128.3
Proportional EBITDA -excluding exceptional items-	146.5	128.2
Proportional occupancy rate	95%	85%
Storage capacity end of period (in million cbm)	4.8	4.8
Subsidiary occupancy rate	95%	85%
Average capital employed	588.2	617.3



## USA &amp; Canada

In EUR millions	2023	2022
Revenues	229.2	242.8
<i>Results -excluding exceptional items-</i>		
Group operating profit / (loss) before depreciation and amortization (EBITDA)	138.9	147.0
Group operating profit / (loss) (EBIT)	101.6	107.1
<i>Results -including exceptional items-</i>		
Group operating profit / (loss) before depreciation and amortization (EBITDA)	187.8	155.5
Group operating profit / (loss) (EBIT)	150.5	115.6
Proportional EBITDA -excluding exceptional items-	163.6	169.9
Proportional occupancy rate	93%	94%
Storage capacity end of period (in million cbm)	2.8	3.0
Subsidiary occupancy rate	93%	95%
Average capital employed	784.5	875.2

## All other Business Units

In EUR millions	2023	2022
Revenues	324.4	308.5
<i>Results -excluding exceptional items-</i>		
Group operating profit / (loss) before depreciation and amortization (EBITDA)	215.7	198.6
Group operating profit / (loss) (EBIT)	137.6	121.0
<i>Results -including exceptional items-</i>		
Group operating profit / (loss) before depreciation and amortization (EBITDA)	214.0	143.6
Group operating profit / (loss) (EBIT)	135.9	66.0
Proportional EBITDA -excluding exceptional items-	226.7	210.8
Proportional occupancy rate	93%	92%
Storage capacity end of period (in million cbm)	3.3	3.3
Subsidiary occupancy rate	93%	91%
Average capital employed	1,100.0	1,212.2

### Enclosure 3: Consolidated financial statements

#### Enclosure 3a: Consolidated Statement of Income

In EUR millions	2023	2022
Revenues	1,425.6	1,367.0
Other operating income	92.3	63.9
<b>Total operating income</b>	<b>1,517.9</b>	<b>1,430.9</b>
Personnel expenses	379.7	364.9
Depreciation and amortization	323.0	339.9
(Reversal of) impairments	- 23.2	448.8
Other operating expenses	359.4	355.5
<b>Total operating expenses</b>	<b>1,038.9</b>	<b>1,509.1</b>
<b>Operating profit / (loss)</b>	<b>479.0</b>	<b>- 78.2</b>
Result joint ventures and associates	212.5	162.3
<b>Group operating profit / (loss) (EBIT)</b>	<b>691.5</b>	<b>84.1</b>
Interest income	10.7	7.3
Finance costs	- 139.6	- 128.0
<b>Net finance costs</b>	<b>- 128.9</b>	<b>- 120.7</b>
<b>Profit / (loss) before income tax</b>	<b>562.6</b>	<b>- 36.6</b>
Income tax	- 73.8	- 101.2
<b>Net profit / (loss)</b>	<b>488.8</b>	<b>- 137.8</b>
<i>Attributable to:</i>		
Holders of ordinary shares	455.7	- 168.4
Non-controlling interests	33.1	30.6
<b>Net profit / (loss)</b>	<b>488.8</b>	<b>- 137.8</b>
<b>Basic earnings per ordinary share (in EUR)</b>	<b>3.63</b>	<b>-1.34</b>
<b>Diluted earnings per ordinary share (in EUR)</b>	<b>3.62</b>	<b>-1.34</b>

In EUR millions	2023			2022
	IFRS figures	Exceptional items	Excluding exceptional items	Excluding exceptional items
Revenues	1,425.6	–	1,425.6	1,367.0
Other operating income	92.3	49.5	42.8	38.9
<b>Total operating income</b>	<b>1,517.9</b>	<b>49.5</b>	<b>1,468.4</b>	<b>1,405.9</b>
Personnel expenses	- 379.7	- 14.6	- 365.1	- 364.9
(Reversal of) impairments	23.2	23.2	–	–
Other operating expenses	- 359.4	- 7.1	- 352.3	- 348.5
Result joint ventures and associates	212.5	–	212.5	194.7
<b>Group operating profit / (loss) before depreciation and amortization (EBITDA)</b>	<b>1,014.5</b>	<b>51.0</b>	<b>963.5</b>	<b>887.2</b>
Depreciation and amortization	- 323.0	–	- 323.0	- 339.9
<b>Group operating profit / (loss) (EBIT)</b>	<b>691.5</b>	<b>51.0</b>	<b>640.5</b>	<b>547.3</b>
Interest income	10.7	–	10.7	7.3
Finance costs	- 139.6	–	- 139.6	- 128.0
<b>Net finance costs</b>	<b>- 128.9</b>	<b>–</b>	<b>- 128.9</b>	<b>- 120.7</b>
<b>Profit / (loss) before income tax</b>	<b>562.6</b>	<b>51.0</b>	<b>511.6</b>	<b>426.6</b>
Income tax	- 73.8	- 12.1	- 61.7	- 101.6
<b>Net profit / (loss)</b>	<b>488.8</b>	<b>38.9</b>	<b>449.9</b>	<b>325.0</b>
<i>Attributable to:</i>				
Holders of ordinary shares	455.7	42.8	412.9	294.4
Non-controlling interests	33.1	- 3.9	37.0	30.6
<b>Net profit / (loss)</b>	<b>488.8</b>	<b>38.9</b>	<b>449.9</b>	<b>325.0</b>
<b>Basic earnings per ordinary share (in EUR)</b>	<b>3.63</b>		<b>3.29</b>	<b>2.35</b>
<b>Diluted earnings per ordinary share (in EUR)</b>	<b>3.62</b>		<b>3.28</b>	<b>2.34</b>

## Enclosure 3b: Consolidated Statement of Comprehensive Income

In EUR millions	2023	2022
<b>Net profit / (loss)</b>	<b>488.8</b>	<b>- 137.8</b>
Exchange differences on translation of foreign operations	- 107.7	88.6
Net investment hedges	37.4	- 41.5
Effective portion of changes in fair value of cash flow hedges	7.2	- 3.1
Use of exchange rate differences on translation of foreign operations and use of net investment hedges	- 0.1	- 0.4
Use of effective portion of cash flow hedges to statement of income	- 0.5	- 2.2
Share in other comprehensive income / (loss) of joint ventures and associates	- 9.3	67.8
<b>Other comprehensive income / (loss) that may be reclassified to statement of income in subsequent periods</b>	<b>- 73.0</b>	<b>109.2</b>
Fair value change other investments	7.6	1.7
Remeasurement of defined benefit plans	6.3	21.7
<b>Other comprehensive income / (loss) that will not be reclassified to statement of income in subsequent periods</b>	<b>13.9</b>	<b>23.4</b>
<b>Other comprehensive income / (loss), net of tax</b>	<b>- 59.1</b>	<b>132.6</b>
<b>Total comprehensive income / (loss)</b>	<b>429.7</b>	<b>- 5.2</b>
<i>Attributable to:</i>		
Holders of ordinary shares	403.5	- 43.0
Non-controlling interests	26.2	37.8
<b>Total comprehensive income / (loss)</b>	<b>429.7</b>	<b>- 5.2</b>



## Enclosure 3c: Consolidated Statement of Financial Position

In EUR millions	31-Dec-23	31-Dec-22
<b>ASSETS</b>		
Intangible assets	102.1	109.7
Property, plant and equipment - owned assets	3,169.5	3,546.6
Property, plant and equipment - right-of-use assets	574.5	648.6
- <i>Joint ventures and associates</i>	1,771.9	1,877.8
- <i>Finance lease receivable</i>	115.9	126.1
- <i>Loans granted</i>	98.9	43.8
- <i>Other financial assets</i>	108.2	94.0
Financial assets	2,094.9	2,141.7
Deferred taxes	38.8	8.7
Derivative financial instruments	9.0	15.1
Pensions and other employee benefits	11.1	—
Other non-current assets	9.4	8.1
<b>Total non-current assets</b>	<b>6,009.3</b>	<b>6,478.5</b>
Trade and other receivables	352.6	318.5
Loans granted and finance lease receivables	27.5	7.7
Prepayments	29.1	37.1
Derivative financial instruments	12.8	58.3
Cash and cash equivalents	197.0	33.8
Assets held for sale	26.0	65.2
<b>Total current assets</b>	<b>645.0</b>	<b>520.6</b>
<b>Total assets</b>	<b>6,654.3</b>	<b>6,999.1</b>
<b>EQUITY</b>		
- <i>Issued capital</i>	62.9	62.9
- <i>Share premium</i>	194.4	194.4
- <i>Treasury shares</i>	- 20.5	- 12.9
- <i>Other reserves</i>	- 81.8	- 30.9
- <i>Retained earnings</i>	3,068.2	2,771.2
<b>Equity attributable to owners of parent</b>	<b>3,223.2</b>	<b>2,984.7</b>
Non-controlling interests	153.2	161.6
<b>Total equity</b>	<b>3,376.4</b>	<b>3,146.3</b>
<b>LIABILITIES</b>		
Interest-bearing loans	1,637.8	1,662.7
Lease liabilities	608.3	688.8
Derivative financial instruments	6.4	1.7
Pensions and other employee benefits	9.1	7.9
Deferred taxes	252.7	251.5
Provisions	58.3	26.6
Other non-current liabilities	36.5	50.8
<b>Total non-current liabilities</b>	<b>2,609.1</b>	<b>2,690.0</b>
Bank overdrafts and short-term borrowings	—	277.9
Interest-bearing loans	205.9	419.0
Lease liabilities	31.4	36.2
Derivative financial instruments	22.3	4.3
Trade and other payables	316.2	317.4
Taxes payable	43.2	51.4
Pensions and other employee benefits	0.2	0.2
Provisions	48.4	18.2
Liabilities related to assets held for sale	1.2	38.2
<b>Total current liabilities</b>	<b>668.8</b>	<b>1,162.8</b>
<b>Total liabilities</b>	<b>3,277.9</b>	<b>3,852.8</b>
<b>Total equity and liabilities</b>	<b>6,654.3</b>	<b>6,999.1</b>



## Enclosure 3d: Consolidated Statement of Changes in Equity

In EUR millions	Equity attributable to owners of parent						Non-controlling interests	Total equity
	Issued capital	Share premium	Treasury shares	Other reserves	Retained earnings	Total		
<b>Balance at 31 December 2021</b>	<b>62.9</b>	<b>194.4</b>	<b>- 15.7</b>	<b>- 157.0</b>	<b>3,104.1</b>	<b>3,188.7</b>	<b>156.9</b>	<b>3,345.6</b>
Net profit / (loss)	—	—	—	—	- 168.4	- 168.4	30.6	- 137.8
Other comprehensive income / (loss), net of tax	—	—	—	125.4	—	125.4	7.2	132.6
<b>Total comprehensive income / (loss)</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>125.4</b>	<b>- 168.4</b>	<b>- 43.0</b>	<b>37.8</b>	<b>- 5.2</b>
Dividend paid in cash	—	—	—	—	- 156.8	- 156.8	- 33.1	- 189.9
Measurement of equity-settled share-based payment arrangements	—	—	—	—	3.3	3.3	—	3.3
Vested shares under equity-settled share-based payment arrangements	—	—	2.8	—	- 5.3	- 2.5	—	- 2.5
Other	—	—	—	0.7	- 5.7	- 5.0	—	- 5.0
<b>Total transactions with owners</b>	<b>—</b>	<b>—</b>	<b>2.8</b>	<b>0.7</b>	<b>- 164.5</b>	<b>- 161.0</b>	<b>- 33.1</b>	<b>- 194.1</b>
<b>Balance at 31 December 2022</b>	<b>62.9</b>	<b>194.4</b>	<b>- 12.9</b>	<b>- 30.9</b>	<b>2,771.2</b>	<b>2,984.7</b>	<b>161.6</b>	<b>3,146.3</b>
Net profit / (loss)	—	—	—	—	455.7	455.7	33.1	488.8
Other comprehensive income / (loss), net of tax	—	—	—	- 52.0	- 0.2	- 52.2	- 6.9	- 59.1
<b>Total comprehensive income / (loss)</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>- 52.0</b>	<b>455.5</b>	<b>403.5</b>	<b>26.2</b>	<b>429.7</b>
Dividend paid in cash	—	—	—	—	- 163.1	- 163.1	- 34.6	- 197.7
Purchase treasury shares	—	—	- 10.5	—	—	- 10.5	—	- 10.5
Measurement of equity-settled share-based payment arrangements	—	—	—	—	8.9	8.9	—	8.9
Vested shares under equity-settled share-based payment arrangements	—	—	2.9	—	- 6.1	- 3.2	—	- 3.2
Others	—	—	—	1.1	1.8	2.9	—	2.9
<b>Total transactions with owners</b>	<b>—</b>	<b>—</b>	<b>- 7.6</b>	<b>1.1</b>	<b>- 158.5</b>	<b>- 165.0</b>	<b>- 34.6</b>	<b>- 199.6</b>
<b>Balance at 31 December 2023</b>	<b>62.9</b>	<b>194.4</b>	<b>- 20.5</b>	<b>- 81.8</b>	<b>3,068.2</b>	<b>3,223.2</b>	<b>153.2</b>	<b>3,376.4</b>

## Enclosure 3e: Consolidated Statement of Cash Flows

In EUR millions	2023	2022
<b>Cash flows from operating activities (gross)</b>	<b>943.1</b>	<b>872.1</b>
Interest received	8.4	9.0
Income tax paid	- 85.3	- 55.9
<b>Cash flows from operating activities (net)</b>	<b>866.2</b>	<b>825.2</b>
<i>Investments:</i>		
Intangible assets	- 17.5	- 17.9
Property, plant and equipment - growth capex	- 159.0	- 95.0
Property, plant and equipment - sustaining, service improvement and IT capex	- 237.5	- 273.2
Joint ventures and associates	- 13.6	- 34.7
Other equity investments	- 8.2	- 8.8
Loans granted	- 126.9	- 6.0
Other non-current assets	- 0.7	- 0.9
Acquisitions of subsidiaries, net of cash acquired	28.5	—
Acquisitions of joint ventures and associates	- 6.6	- 174.2
<b>Total investments</b>	<b>- 541.5</b>	<b>- 610.7</b>
<i>Disposals and repayments:</i>		
Property, plant and equipment	1.8	2.2
Joint ventures and associates	47.7	4.6
Loans granted	61.4	6.3
Finance lease receivable	13.3	13.6
Assets held for sale/divestments	523.2	104.8
<b>Total disposals and repayments</b>	<b>647.4</b>	<b>131.5</b>
<b>Cash flows from investing activities (excluding derivatives)</b>	<b>105.9</b>	<b>- 479.2</b>
Settlement of derivatives (net investment hedges)	3.7	- 10.2
<b>Cash flows from investing activities (including derivatives)</b>	<b>109.6</b>	<b>- 489.4</b>
<i>Financing:</i>		
Repayment from interest-bearing loans	- 673.9	- 684.9
Proceeds from interest-bearing loans	499.4	871.9
Repayment lease liabilities	- 39.1	- 40.9
Interest expenses paid on lease liabilities	- 23.3	- 23.2
Finance expenses paid	- 123.3	- 105.9
Settlement of derivative financial instruments	43.3	4.6
Dividend paid in cash	- 163.1	- 156.8
Dividend paid to non-controlling interests	- 34.6	- 33.1
Purchase treasury shares	- 10.5	—
Proceeds and repayments in short-term financing	- 276.8	- 185.2
<b>Cash flows from financing activities</b>	<b>- 801.9</b>	<b>- 353.5</b>
<b>Net cash flows</b>	<b>173.9</b>	<b>- 17.7</b>
Exchange differences	- 1.2	1.4
Net change in cash and cash equivalents due to assets held for sale	- 8.4	- 21.8
<b>Net change in cash and cash equivalents (including bank overdrafts)</b>	<b>164.3</b>	<b>- 38.1</b>
<b>Net cash and cash equivalents at 1 January (including bank overdrafts)</b>	<b>32.7</b>	<b>70.8</b>
<b>Net cash and cash equivalents at 31 December (including bank overdrafts)</b>	<b>197.0</b>	<b>32.7</b>

## Enclosure 3f: Segmentation

Statement of income		Asia & Middle East		China & North Asia		Netherlands		Singapore		USA & Canada		of which United States		All other Business Units		Global functions and corporate activities		Total	
In EUR millions		2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022
Revenues		75.2	76.2	45.2	51.5	458.9	428.6	285.2	252.6	229.2	242.8	229.2	228.8	324.4	308.5	7.5	6.8	1,425.6	1,367.0
Other operating income		12.4	15.2	6.7	8.9	11.3	2.1	1.4	0.3	5.4	7.8	5.4	7.8	1.7	0.8	3.9	3.8	42.8	38.9
Operating expenses		- 39.3	- 35.9	- 28.4	- 31.9	- 224.0	- 235.3	- 76.5	- 69.5	- 109.6	- 118.8	- 110.4	- 115.1	- 135.3	- 129.6	- 104.3	- 92.4	- 717.4	- 713.4
Result joint ventures and associates		85.0	79.3	43.5	40.2	42.8	39.5	0.8	0.7	13.9	15.2	3.7	4.4	24.9	18.9	1.6	0.9	212.5	194.7
<b>EBITDA</b>		<b>133.3</b>	<b>134.8</b>	<b>67.0</b>	<b>68.7</b>	<b>289.0</b>	<b>234.9</b>	<b>210.9</b>	<b>184.1</b>	<b>138.9</b>	<b>147.0</b>	<b>127.9</b>	<b>125.9</b>	<b>215.7</b>	<b>198.6</b>	<b>- 91.3</b>	<b>- 80.9</b>	<b>963.5</b>	<b>887.2</b>
Depreciation and amortization		- 19.5	- 19.8	- 13.0	- 12.8	- 96.6	- 113.7	- 56.7	- 55.8	- 37.3	- 39.9	- 37.3	- 39.9	- 78.1	- 77.6	- 21.8	- 20.3	- 323.0	- 339.9
<b>Total EBIT excluding exceptional items</b>		<b>113.8</b>	<b>115.0</b>	<b>54.0</b>	<b>55.9</b>	<b>192.4</b>	<b>121.2</b>	<b>154.2</b>	<b>128.3</b>	<b>101.6</b>	<b>107.1</b>	<b>90.6</b>	<b>86.0</b>	<b>137.6</b>	<b>121.0</b>	<b>- 113.1</b>	<b>- 101.2</b>	<b>640.5</b>	<b>547.3</b>
Exceptional items		- 1.7	- 0.8	- 31.6	-	49.6	- 418.7	- 0.2	-	48.9	8.5			- 1.7	- 55.0	- 12.3	2.8	51.0	- 463.2
<b>Total EBIT including exceptional items</b>		<b>112.1</b>	<b>114.2</b>	<b>22.4</b>	<b>55.9</b>	<b>242.0</b>	<b>- 297.5</b>	<b>154.0</b>	<b>128.3</b>	<b>150.5</b>	<b>115.6</b>			<b>135.9</b>	<b>66.0</b>	<b>- 125.4</b>	<b>- 98.4</b>	<b>691.5</b>	<b>84.1</b>
<b>Reconciliation consolidated net profit / (loss)</b>																			
Net finance costs																		- 128.9	- 120.7
<b>Profit / (loss) before income tax</b>																		<b>562.6</b>	<b>- 36.6</b>
Income tax																		- 73.8	- 101.2
<b>Net profit / (loss)</b>																		<b>488.8</b>	<b>- 137.8</b>
Non-controlling interests																		- 33.1	- 30.6
<b>Net profit (loss) holders of ordinary shares</b>																		<b>455.7</b>	<b>- 168.4</b>
Occupancy rate subsidiaries		93%	87%	68%	73%	91%	86%	95%	85%	93%	95%			93%	91%			91%	87%

Statement of financial position		Asia & Middle East		China & North Asia		Netherlands		Singapore		USA & Canada		of which United States		All other Business Units		Global functions and corporate activities		Total	
In EUR millions		2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022
Assets of subsidiaries		476.2	374.4	176.1	208.6	1,097.1	1,399.9	864.6	884.9	612.7	690.8	609.5	624.0	1,204.5	1,170.1	451.2	392.6	4,882.4	5,121.3
Joint ventures and associates		619.7	759.1	366.1	375.3	258.1	204.2	1.3	1.3	321.3	324.5	221.9	239.3	186.0	195.7	19.4	17.7	1,771.9	1,877.8
<b>Total assets</b>		<b>1,095.9</b>	<b>1,133.5</b>	<b>542.2</b>	<b>583.9</b>	<b>1,355.2</b>	<b>1,604.1</b>	<b>865.9</b>	<b>886.2</b>	<b>934.0</b>	<b>1,015.3</b>	<b>831.4</b>	<b>863.3</b>	<b>1,390.5</b>	<b>1,365.8</b>	<b>470.6</b>	<b>410.3</b>	<b>6,654.3</b>	<b>6,999.1</b>
<b>Total liabilities</b>		<b>180.3</b>	<b>185.0</b>	<b>23.4</b>	<b>23.6</b>	<b>317.8</b>	<b>397.8</b>	<b>506.6</b>	<b>528.1</b>	<b>140.8</b>	<b>196.3</b>	<b>126.7</b>	<b>135.9</b>	<b>269.2</b>	<b>200.8</b>	<b>1,839.8</b>	<b>2,321.2</b>	<b>3,277.9</b>	<b>3,852.8</b>



## Enclosure 3g: Overview of exceptional items

In EUR millions	2023	2022
Gains on assets held for sale/divestments	49.5	25.0
Loss on assets held for sale/divestments	- 4.9	- 6.0
(Reversal of) impairments	23.2	- 448.8
Personnel expenses	- 14.6	-
Other operating expenses	- 2.2	- 1.0
<b>Operating profit (loss)</b>	<b>51.0</b>	<b>- 430.8</b>
Result joint ventures and associates	-	- 32.4
<b>Group operating profit / (loss)</b>	<b>51.0</b>	<b>- 463.2</b>
Finance costs	-	-
<b>Profit / (loss) before income tax</b>	<b>51.0</b>	<b>- 463.2</b>
Income tax	- 12.1	0.4
<b>Total effect on net profit / (loss)</b>	<b>38.9</b>	<b>- 462.8</b>

## Enclosure 4: Non-IFRS proportional financial information

### Basis of preparation

Vopak provides non-IFRS proportional financial information -excluding exceptional items- to provide additional operational performance insights on a comparable basis for subsidiaries, joint ventures and associates. In this disclosure, the joint ventures and associates and the subsidiaries with non-controlling interests are consolidated based on the economic ownership interests of the Group in these entities. In the tables in this section, we provide the proportional financial information for the statement of income, the statement of financial position, and the segment information for each of our reportable segments. Where applicable, we show a reconciliation with our closest comparable IFRS figures in order to create comparability with the proportional information. Other information is based on the same principles as applied for the proportional financial information.

### Proportional financial information

#### Statement of income

	2023				2022			
	IFRS figures	Exclusion exceptional items	Effects proportion-al consolidation	Proportion-al consolidated	IFRS figures	Exclusion exceptional items	Effects proportion-al consolidation	Proportion-al consolidated
<b>In EUR millions</b>								
Revenues	1,425.6	–	516.3	1,941.9	1,367.0	–	490.2	1,857.2
Other operating income	92.3	49.5	73.8	116.6	63.9	25.0	65.5	104.4
Operating expenses	- 739.1	- 21.7	- 187.1	- 904.5	- 720.4	- 7.0	- 180.4	- 893.8
Result joint ventures and associates	212.5	–	- 212.5	–	162.3	- 32.4	- 194.7	–
(Reversal of) impairments	23.2	23.2	–	–	- 448.8	- 448.8	–	–
<b>Group operating profit / (loss) before depreciation and amortization (EBITDA)</b>	<b>1,014.5</b>	<b>51.0</b>	<b>190.5</b>	<b>1,154.0</b>	<b>424.0</b>	<b>- 463.2</b>	<b>180.6</b>	<b>1,067.8</b>
Depreciation and amortization	- 323.0	–	- 116.9	- 439.9	- 339.9	–	- 112.9	- 452.8
<b>Group operating profit / (loss) (EBIT)</b>	<b>691.5</b>	<b>51.0</b>	<b>73.6</b>	<b>714.1</b>	<b>84.1</b>	<b>- 463.2</b>	<b>67.7</b>	<b>615.0</b>
Net finance costs	- 128.9	–	- 67.1	- 196.0	- 120.7	–	- 62.5	- 183.2
Income tax	- 73.8	- 12.1	- 43.5	- 105.2	- 101.2	0.4	- 35.8	- 137.4
<b>Net profit / (loss)</b>	<b>488.8</b>	<b>38.9</b>	<b>- 37.0</b>	<b>412.9</b>	<b>- 137.8</b>	<b>- 462.8</b>	<b>- 30.6</b>	<b>294.4</b>
Non-controlling interests	- 33.1	3.9	37.0	–	- 30.6	–	30.6	–
<b>Net profit / (loss) owners of parent</b>	<b>455.7</b>	<b>42.8</b>	<b>–</b>	<b>412.9</b>	<b>- 168.4</b>	<b>- 462.8</b>	<b>–</b>	<b>294.4</b>

#### Statement of financial position

	31-Dec-23			31-Dec-22		
	IFRS figures	Effects proportion-al consolidation	Proportion-al consolidated	IFRS figures	Effects proportion-al consolidation	Proportion-al consolidated
<b>In EUR millions</b>						
Non-current assets (excl. joint ventures and associates)	4,237.4	3,111.4	7,348.8	4,600.7	2,979.5	7,580.2
Joint ventures and associates	1,771.9	- 1,771.9	–	1,877.8	- 1,877.8	–
Current assets	645.0	493.1	1,138.1	520.6	442.2	962.8
<b>Total assets</b>	<b>6,654.3</b>	<b>1,832.6</b>	<b>8,486.9</b>	<b>6,999.1</b>	<b>1,543.9</b>	<b>8,543.0</b>
Non-current liabilities	2,609.1	1,501.0	4,110.1	2,690.0	1,291.1	3,981.1
Current liabilities	668.8	484.8	1,153.6	1,162.8	414.4	1,577.2
<b>Total liabilities</b>	<b>3,277.9</b>	<b>1,985.8</b>	<b>5,263.7</b>	<b>3,852.8</b>	<b>1,705.5</b>	<b>5,558.3</b>
Equity attributable to owners of parent	3,223.2	–	3,223.2	2,984.7	–	2,984.7
Non-controlling interests	153.2	- 153.2	–	161.6	- 161.6	–
<b>Total equity</b>	<b>3,376.4</b>	<b>- 153.2</b>	<b>3,223.2</b>	<b>3,146.3</b>	<b>- 161.6</b>	<b>2,984.7</b>

## Net interest-bearing debt

In EUR millions	31-Dec-23	31-Dec-22
Non-current portion of interest-bearing loans	3,490.5	3,552.2
Current portion of interest-bearing loans	487.1	656.3
<b>Total interest-bearing loans</b>	<b>3,977.6</b>	<b>4,208.5</b>
Short-term borrowings	43.9	312.9
Bank overdrafts	—	1.1
Cash and cash equivalents	- 436.2	- 313.8
<b>Net interest-bearing debt</b>	<b>3,585.3</b>	<b>4,208.7</b>

## Other information

	2023	2022
EBITDA margin -excluding exceptional items-	56.1%	54.4%
Proportional occupancy rate	91%	88%
Sustaining, service improvement and IT capex (in EUR million)	289.7	314.9

# Year-to-date segment information

## Statement of income

	Asia & Middle East		China & North Asia		Netherlands		Singapore		USA & Canada		Of which United States		All other Business Units		Global functions and corporate activities		Total	
In EUR millions	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022
Revenues	356.4	352.0	142.5	141.1	576.4	527.2	200.9	178.5	317.7	331.5	302.9	303.1	324.1	305.0	23.9	21.9	1,941.9	1,857.2
Other operating income	12.7	12.4	8.4	9.5	11.7	1.7	0.1	- 0.6	14.2	17.4	4.9	7.3	65.7	60.2	3.8	3.8	116.6	104.4
Operating expenses	- 108.5	- 113.1	- 52.4	- 53.1	- 247.7	- 246.5	- 54.5	- 49.7	- 168.3	- 179.0	- 155.3	- 162.0	- 163.1	- 154.4	- 110.0	- 98.0	- 904.5	- 893.8
EBITDA	260.6	251.3	98.5	97.5	340.4	282.4	146.5	128.2	163.6	169.9	152.5	148.4	226.7	210.8	- 82.3	- 72.3	1,154.0	1,067.8
Depreciation and amortization	- 91.0	- 95.8	- 30.5	- 28.3	- 123.7	- 134.6	- 39.0	- 38.4	- 52.9	- 54.0	- 52.8	- 53.6	- 77.0	- 77.6	- 25.8	- 24.1	- 439.9	- 452.8
EBIT excluding exceptional items	169.6	155.5	68.0	69.2	216.7	147.8	107.5	89.8	110.7	115.9	99.7	94.8	149.7	133.2	- 108.1	- 96.4	714.1	615.0
Exceptional items	- 1.7	- 0.8	- 26.4	-	- 49.6	- 418.7	- 0.1	-	48.9	8.5	53.2	-	- 1.7	- 64.1	- 12.3	2.8	56.3	- 472.3
EBIT including exceptional items	167.9	154.7	41.6	69.2	266.3	- 270.9	107.4	89.8	159.6	124.4	152.9	94.8	148.0	69.1	- 120.4	- 93.6	770.4	142.7
Occupancy rate	92%	87%	83%	85%	91%	86%	95%	85%	93%	94%			93%	92%			91%	88%
Net interest-bearing debt																	3,585.3	4,208.7

	Asia & Middle East		China & North Asia		Netherlands		Singapore		USA & Canada		All other Business Units		Global functions and corporate activities		Total	
In EUR millions	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022
Chemical products	104.5	108.7	117.0	118.1	124.6	116.0	102.4	95.1	206.2	204.2	163.9	156.2	11.1	10.1	829.7	808.4
Oil products	169.0	171.3	0.9	0.7	216.5	189.9	91.3	72.5	63.7	86.9	100.3	95.5	2.4	1.9	644.1	618.7
Vegoils and biofuels	3.1	3.0	1.7	0.1	81.1	70.9	-	-	30.2	23.7	29.5	24.6	0.9	0.9	146.5	123.2
Gas products	66.7	61.7	21.0	21.5	153.1	134.7	3.6	1.7	17.3	16.7	20.6	16.3	-	-	282.3	252.6
Others	13.1	7.3	1.9	0.7	1.1	15.7	3.6	9.2	0.3	-	9.8	12.4	9.5	9.0	39.3	54.3
Total	356.4	352.0	142.5	141.1	576.4	527.2	200.9	178.5	317.7	331.5	324.1	305.0	23.9	21.9	1,941.9	1,857.2



## Enclosure 5: Vopak key results Q4 2023

## Quarterly segment information

IFRS	Asia & Middle East		China & North Asia		Netherlands		Singapore		USA & Canada		Of which United States		All other Business Units		Global functions and corporate activities		Total		
In EUR millions	Q4 2023	Q3 2023	Q4 2023	Q3 2023	Q4 2023	Q3 2023	Q4 2023	Q3 2023	Q4 2023	Q3 2023	Q4 2023	Q3 2023	Q4 2023	Q3 2023	Q4 2023	Q3 2023	Q4 2023	Q3 2023	
Revenues	19.6	18.1	11.7	10.1	108.9	119.2	70.4	70.2	57.9	53.2	57.9	53.1	81.4	80.1	2.9	1.1	352.8	352.0	
Other operating income	3.5	2.5	1.6	1.1	2.7	4.2	0.4	0.3	0.6	2.3	0.5	2.4	0.9	0.8	0.8	1.0	10.5	12.2	
Operating expenses	- 12.1	- 10.2	- 7.0	- 6.3	- 54.3	- 56.0	- 20.2	- 18.3	- 28.8	- 26.6	- 27.4	- 26.3	- 39.9	- 33.2	- 26.4	- 28.6	- 188.7	- 179.2	
Result joint ventures and associates	21.8	23.4	11.2	10.1	12.0	10.5	0.1	0.1	3.5	3.4	1.0	0.8	4.9	7.6	0.7	0.4	54.2	55.5	
EBITDA	32.8	33.8	17.5	15.0	69.3	77.9	50.7	52.3	33.2	32.3	32.0	30.0	47.3	55.3	- 22.0	- 26.1	228.8	240.5	
Depreciation and amortization	- 4.7	- 5.2	- 3.3	- 3.1	- 19.9	- 26.6	- 14.0	- 13.9	- 9.1	- 8.8	- 9.2	- 8.7	- 21.5	- 19.3	- 6.1	- 5.4	- 78.6	- 82.3	
EBIT excluding exceptional items	28.1	28.6	14.2	11.9	49.4	51.3	36.7	38.4	24.1	23.5	22.8	21.3	25.8	36.0	- 28.1	- 31.5	150.2	158.2	
Exceptional items	—	- 1.7	- 31.0	- 0.6	- 4.6	54.2	—	- 0.2	—	- 0.8	—	—	- 0.7	- 1.0	- 4.9	- 3.9	- 41.2	46.0	
EBIT including exceptional items	28.1	26.9	- 16.8	11.3	44.8	105.5	36.7	38.2	24.1	22.7	—	—	25.1	35.0	- 33.0	- 35.4	109.0	204.2	
Reconciliation consolidated net profit / (loss)																			
Net finance costs																		- 31.4	- 31.2
Profit / (loss) before income tax																		77.6	173.0
Income tax																		14.5	- 19.7
Net profit / (loss)																		92.1	153.3
Non-controlling interests																		- 4.7	- 9.1
Net profit / (loss) holders of ordinary shares																		87.4	144.2
Occupancy rate subsidiaries	94%	93%	69%	66%	90%	92%	93%	93%	96%	92%			93%	93%			91%	91%	

## Quarterly segment information

IFRS	Asia & Middle East		China & North Asia		Netherlands		Singapore		USA & Canada		Of which United States		All other Business Units		Global functions and corporate activities		Total		
	Q4 2023	Q4 2022	Q4 2023	Q4 2022	Q4 2023	Q4 2022	Q4 2023	Q4 2022	Q4 2023	Q4 2022	Q4 2023	Q4 2022	Q4 2023	Q4 2022	Q4 2023	Q4 2022	Q4 2023	Q4 2022	
In EUR millions																			
Revenues	19.6	18.5	11.7	11.7	108.9	116.4	70.4	67.5	57.9	59.2	57.9	59.4	81.4	80.5	2.9	1.5	352.8	355.3	
Other operating income	3.5	3.7	1.6	2.8	2.7	0.3	0.4	- 0.7	0.6	2.6	0.5	2.6	0.9	0.2	0.8	1.5	10.5	10.4	
Operating expenses	- 12.1	- 8.4	- 7.0	- 8.0	- 54.3	- 71.5	- 20.2	- 18.8	- 28.8	- 30.1	- 27.4	- 29.8	- 39.9	- 32.0	- 26.4	- 22.3	- 188.7	- 191.1	
Result joint ventures and associates	21.8	23.0	11.2	10.2	12.0	12.9	0.1	0.2	3.5	3.4	1.0	0.6	4.9	3.2	0.7	0.3	54.2	53.2	
EBITDA	32.8	36.8	17.5	16.7	69.3	58.1	50.7	48.2	33.2	35.1	32.0	32.8	47.3	51.9	- 22.0	- 19.0	228.8	227.8	
Depreciation and amortization	- 4.7	- 4.7	- 3.3	- 3.2	- 19.9	- 20.9	- 14.0	- 14.5	- 9.1	- 10.4	- 9.2	- 10.4	- 21.5	- 19.3	- 6.1	- 4.5	- 78.6	- 77.5	
EBIT excluding exceptional items	28.1	32.1	14.2	13.5	49.4	37.2	36.7	33.7	24.1	24.7	22.8	22.4	25.8	32.6	- 28.1	- 23.5	150.2	150.3	
Exceptional items	—	5.2	- 31.0	—	- 4.6	11.3	—	—	—	—	—	—	- 0.7	- 17.1	- 4.9	- 1.0	- 41.2	- 1.6	
EBIT including exceptional items	28.1	37.3	- 16.8	13.5	44.8	48.5	36.7	33.7	24.1	24.7	—	—	25.1	15.5	- 33.0	- 24.5	109.0	148.7	
Reconciliation consolidated net profit / (loss)																			
Net finance costs																		- 31.4	- 30.7
Profit / (loss) before income tax																		77.6	118.0
Income tax																		14.5	- 23.8
Net profit / (loss)																		92.1	94.2
Non-controlling interests																		- 4.7	- 7.3
Net profit / (loss) holders of ordinary shares																		87.4	86.9
Occupancy rate subsidiaries	94%	91%	69%	70%	90%	90%	93%	88%	96%	97%			93%	92%			91%	90%	



[illegible][illegible]

**SECTION IX – RELEASES FROM SOLID WASTE UNITS  
AND CORRECTIVE ACTIONS**

## 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<sup>2</sup>. 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.

<sup>2</sup>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 consist 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.

Complete Preliminary Review Facility Checklist (located in attachments)

[Instructions for Preliminary Review Unit Checklist](#)

[Preliminary Review Facility Checklist](#)

[Preliminary Review Unit Checklist](#)

**APPENDIX IX**  
**RELEASES FROM SOLID WASTE UNITS AND CORRECTIVE ACTIONS**





**RELEASES FORM SOLID WASTE UNITS AND  
CORRECTIVE ACTIONS  
PART B – SECTION IX**

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
PERMIT RENEWAL APPLICATION FOR A HAZARDOUS WASTE  
STORAGE, PROCESSING, AND DISPOSAL FACILITY**

**HAZARDOUS WASTE PERMIT NO. 50025**

**DATE: SEPTEMBER 6, 2024**

**PREPARED FOR:**

**VOPAK LOGISTICS SERVICES USA, INC.  
VOPAK LOGISTICS SERVICES USA DEER PARK  
2759 INDEPENDENCE PARKWAY SOUTH  
DEER PARK, TEXAS 77536**



**PREPARED BY:**

**ENGICON ENVIRONMENTAL, LLC.  
1717 WEST 34<sup>TH</sup> STREET, SUITE 600 # 120  
HOUSTON, TEXAS, 77018**



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## ATTACHMENTS

Attachment IX.A – Preliminary Review Facility Checklist

Attachment IX.B – Preliminary Review Unit Checklist

Attachment IX.C – TCEQ Letter dated February 18, 1997



## **1.0 INTRODUCTION**

The Releases from Solid Waste Units and Corrections Actions is prepared for the Vopak Logistics Services USA Deer Park facility located at 2759 Independence Parkway South, Deer Park, Texas 77536 (hereafter referred to as VLS or the facility). The document has been prepared to identify releases to the environment from any solid waste management unit (SWMU) which are known to have occurred or have a significant potential for having occurred, and to comply with the hazardous waste permit in accordance with Title 40 of the Code of Federal Regulations (CFR) Part 270 Subpart B Rule 14.(d) and Title 30 of the Texas Administrative Code (TAC) Chapter 335 (30 TAC §367 – Corrective Action for SWMUs).

### **1.1 Basis**

In addition, this document has been prepared in accordance with the requirements of Section 3004(u) of the Hazardous and Solid Waste Amendments of 1984 to the Resource Conservation and Recovery Act (RCRA).

### **1.2 Purpose and Approach**

The objective of this document is to perform a Preliminary Review (PR) as part of a RCRA Facility Assessment (RFA) at the facility, and a Visual Site Assessment to further assess potential releases to the environment.

The Preliminary Review Facility Checklist is provided as Attachment IX-A, and the Preliminary Review Unit Checklist is provided as Attachment IX.-B. Other supporting data is provided in attachments as needed.

## **2.0 GENERAL FACILITY INFORMATION**

Vopak Logistics Services USA, Inc. operates a hazardous and industrial solid waste storage, treatment and disposal facility. The facility is permitted to receive hazardous waste in containers, tank trucks, and railcars. The facility consists of two container storage areas, and 49 tanks and tank systems located within secondary containment areas designed to contain spills or leaks, precipitation and prevent run-on.

### **2.1 Facility Description**

VLS is comprised of approximately five acres of land, which is developed with buildings, structures, and outdoor storage areas that are used in facility operations. The hazardous waste management units (storage container areas and storage tanks) are and will be (e.g., Not Built Yet) located within the following areas:

- 05-F-4 Area;
- 500 Series Storage Area;
- CSA 05-D-1, current;
- CSA 05-D-1, proposed;
- CSA 05-D-3;
- Deepwell Injection Area;
- Emulsified Oil Treatment System (referred to as EOTs), current;
- EOTs, proposed;
- Heal Tank Area;
- Truck Unloading Area; and
- Wastewater Emulsified Oil Treatment System (referred to as WW EOTS).

The permitted hazardous waste management units are shown on the Facility Plot Plan.

The facility has been designed to store, treat and/or dispose several of TCEQ's hazardous and nonhazardous waste codes, and several of EPA's characteristically hazardous or listed hazardous waste or combination of waste listed in 40 CFR 261 (refer to Part A, Table III-1 – Hazardous Wastes and Management Activities).

### **2.2 Facility Maps**

Several drawings have been prepared (or are provided) and include the following items:

- Facility Boundaries and Adjacent Waters Map;
- Facility Plot Plan; and
- Flood Plain Map.

## **3.0 FACILITY EVALUATION**

As part of the Preliminary Review the following documents, sources and data were reviewed.

### **3.1 Records Review**

Available facility records and publicly available records including regulatory data base search engines were reviewed to identify a known or suspected release of wastes or waste constituents to the environment from the facility. As summarized in Attachment IX-A Preliminary Review Facility Checklist, the two previous permit renewal applications, permit modifications, the permit and other application data (e.g., closure requests) did not document releases to the environment or contained data which would suggest a condition likely to be associated with a release at the facility except for the following historical item:

- A letter dated February 18, 1997 related to an onsite investigation that identified no evidence of a release and the agency's granting of a "No Further Action" to the facility, under Empak, Inc.

### **3.2 Limited Site Reconnaissance**

A limited site reconnaissance was performed during a site visit to include the following items:

- The containers, tanks and tank systems that are used to store and manage hazardous waste;
- The deep injection well and the surrounding area;
- Stormwater drainage patterns and flow;
- Loading / Unloading procedures; and
- The secondary containment areas for the container storage areas and the tanks and tank systems.

No condition was observed at these locations to warrant concern or the need for additional assessment.

### **3.3 Conclusion**

Based on review of available records, and a limited site reconnaissance at the facility, there does not appear to be any objective evidence of a release to the environment from any of the identified SWMUs at this facility. This conclusion was also reached in the prior Part B permit renewal application, and there does not appear to have been any changes to the facility's operations to suggest that such changes could have created a greater potential for such releases now than what was existing at that time. Accordingly, no further action at this time is warranted to further investigate the potential for the release of waste or hazardous constituents at the facility. In addition, the waste management units should be periodically inspected for evidence of releases.

**ATTACHMENT IX-A**  
**PRELIMINARY REVIEW FACILITY CHECKLIST**

**Preliminary Review Facility Checklist**

Facility:	Vopak Logistics Services USA Deer Park	City	Deer Park
ISW Reg. No:	30567	Date	
Permit No.	50025	Reviewer:	
EPA ID No.	TXD097673149		

**A. Waste Management Units:****RCRA Regulated Units:**

NOR. No.	Description	Status
022, 023, 024, 025, 027, 029, 030, 031, 032, 033, 034, 035, 036, 038, 039, 049, 052, 056, 057, 058, 059, 060, 061, 062, 063, 064, 065, 066, 067, 069, 070, 081, 107, 112, and 113.	Tank	Active
050.	Tank	Inactive
002, 020, 026, 028, 037, 053, and 054,	Tank	Closed
040, 041, 042, 108, 109, 110, and 111.	Tank	Not Yet Built
043, 044, 045, 046, 047, 048, 051, 055, 097, 098, 099, 100, 101, 102, 103, 104, 105, 114 and 115.	Tank	Never Built
017, 018	Tank (surface)	Active
015, 019	Tank (surface)	Closed
005, 014	Container Storage Area	Active
021	Container Storage Area	Closed
068, and 105	Container Storage Area	Never Built
078, 079, 080, and 117.	Filter	Active

071	Filter	Closed
103, and 104	Filter	Never Built
003	Injection Well (UIC Permitted)	Active
106	Injection Well (UIC Permitted)	Not Yet Built

## Solid Waste Management Units:

NOR. No.	Description	Status
001	Land Treatment Unit	Closed
004	Wastewater Treatment Facility	Active
093, 094, 095 and 096.	Tank	Active
006, 007, 008, 009 and 010.	Tank	Closed
011, 012, 013	Miscellaneous Storage Containers	Active
090, 091, 092, and 116.	Container Storage Area	Active
016	Tank (surface)	Closed

## B. Reviewed Documents

RCRA: Part A and Part B of Permit Renewal Applications 2013/2014 and 2002

Part A ☐ Permit No. 50025Part B ☐ Permit No. 50025Permit ☐ Permit No. 50025

CERCLA: Texas Site Summaries, TCEQ Central Registry, EPA Superfund Sites, Envirofacts.

Inspection Reports:	Vopak Inspection Reports
Enforcement Actions	None
Exposure Information	None
Other Information:	TCEQ "No Further Action" letter dated February 18, 1997

## C. Summary:

Based on the reviewed documents, available records and TCEQ Letter dated February 18, 1997 the facility met the requirements of this section and no further action is needed
--

## D. Recommended Action::

No Further Action
-------------------



**ATTACHMENT IX-B**  
**PRELIMINARY REVIEW UNIT CHECKLIST**

Permit No. 50025

Permittee: Vopak Logistics Services USA, Inc.

Page 1 of 2

**Preliminary Review Unit Checklist**

Facility:	Vopak Logistics Services USA Deer Park	City	Deer Park
ISW Reg. No:	30567	Date	
Permit No.	50025	Reviewer:	
EPA ID No.	TXD097673149		

Waste Management Unit(s): **NOT APPLICABLE. No further action status was granted on 02/18/1997 (see attached letter).**

A. NOR No.:

B. Description:

C. Dates of Operation:

Wastes Managed:

Evidence of Release:

Pollutant Dispersal Pathways:

Summary:

Recommended Action:

A. NOR No.:

B. Description:

C. Dates of Operation:

Wastes Managed:

Evidence of Release:

Pollutant Dispersal Pathways:

Summary:

Recommended Action:

A. NOR No.:

B. Description:

C. Dates of Operation:

Wastes Managed:	
Evidence of Release:	
Pollutant Dispersal Pathways:	
Summary:	
Recommended Action:	
A. NOR No.:	
B. Description:	
C. Dates of Operation:	
Wastes Managed:	
Evidence of Release:	
Pollutant Dispersal Pathways:	
Summary:	
Recommended Action:	
A. NOR No.:	
B. Description:	
C. Dates of Operation:	
Wastes Managed:	
Evidence of Release:	
Pollutant Dispersal Pathways:	
Summary:	
Recommended Action:	

**ATTACHMENT IX-C**  
**TCEQ LETTER DATED FEBRUARY 18, 1997**

Barry R. McBee, *Chairman*  
R. B. "Ralph" Marquez, *Commissioner*  
John M. Baker, *Commissioner*  
Dan Pearson, *Executive Director*



RECEIVED

FEB 21 1997

## TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

*Protecting Texas by Reducing and Preventing Pollution*

February 18, 1997

Mr. Quirino Q. Wong  
Manager, Environmental Affairs  
Pakhoed Corporation  
2000 West Loop South  
Suite 2200  
Houston, TX 77027-3597

RE: No Further Action Request - Approval  
Empak Inc, Deer Park Terminal  
TNRCC Industrial Solid Waste Registration No. 30567  
TNRCC Hazardous Waste Permit No. HW-50025-001  
EPA ID No. TXD097673749

Dear Mr. Wong:

The Corrective Action staff of the Texas Natural Resource Conservation Commission (TNRCC) has received proof of public notice for your proposal for "No Further Action" and the sworn publishers affidavit dated November 22, 1996. The proposal was based upon the investigation data which revealed no evidence of release. The TNRCC hereby approves Empak's request for "No Further Action" at the operating Solid Waste Management Units (SWMUs) listed in Permit Provision VIII. A, and grants corrective action termination.

Please be advised that should the TNRCC have a concern about the release of hazardous constituents from these or other SWMUs at the facility at any time in the future, EMPAK will be obliged to investigate according to TNRCC and EPA regulations. If you should have any questions regarding this or any other SWMU matter, please feel free to contact Paula McCormick at (512) 239-2363, Mail Code MC 127.

Sincerely,

A handwritten signature in cursive script that reads "Ray S. Risner".

Ray S. Risner, Supervisor  
Corrective Action Team  
Corrective Action Section  
Industrial & Hazardous Waste Division

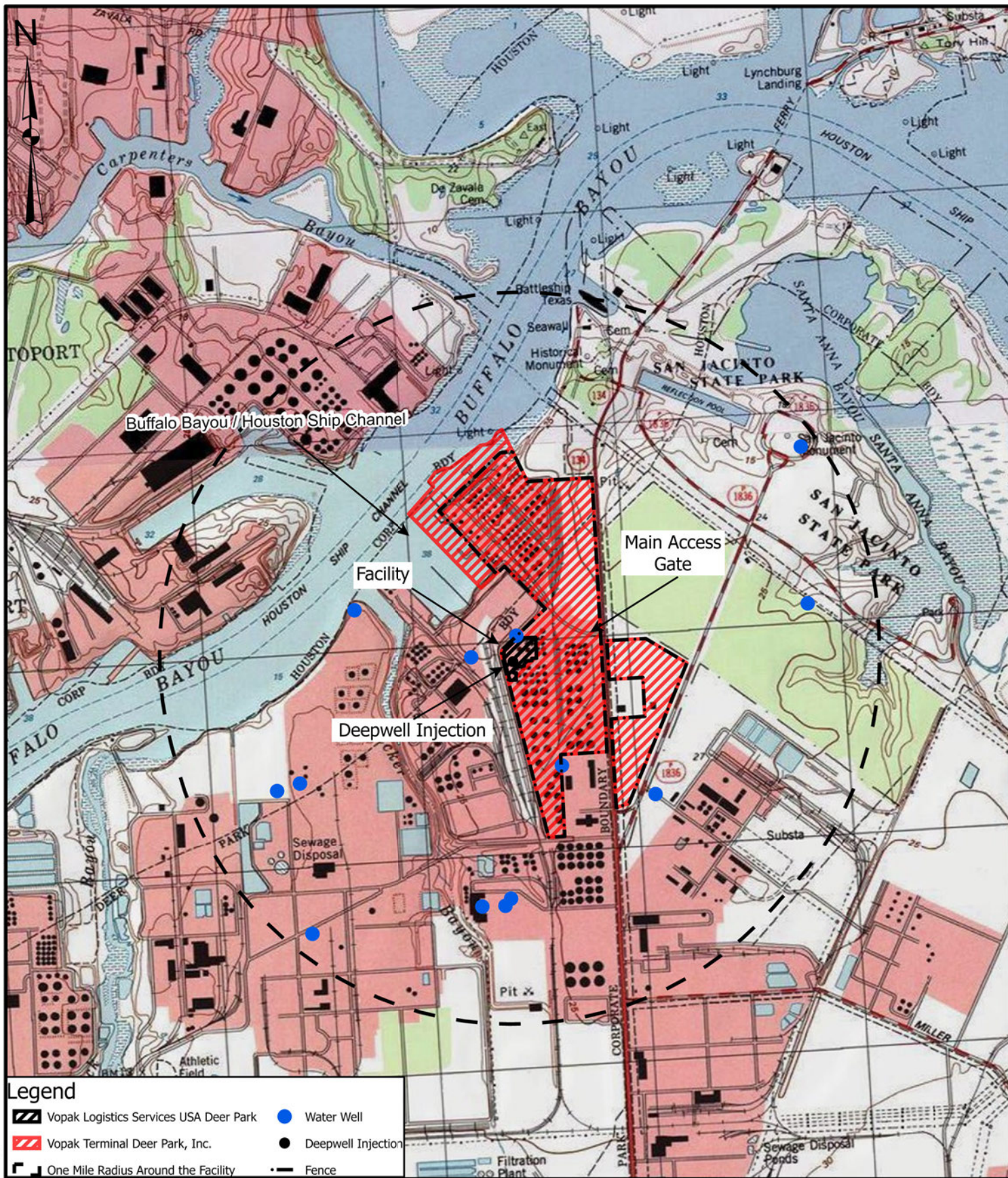
Mr. Quirino Q. Wong  
Page 2  
February 18, 1997

RSR/pm

cc: Marsha Hill, TNRCC Region 12, Houston  
Tennie Larson, TNRCC Corrective Action Section  
(CA-375a, 999)

## **APPENDIX IX.A DRAWINGS**





Source: Vopak Logistics Services USA, Inc., ArcGIS Data, and Harris County Appraisal District

Note: Drawing to be used for Permitting Purposes Only

Revision No.1  
Date: January 20, 2025

Date: July 31, 2024

Vopak Logistics Services USA, Inc.  
2759 Independence Parkway South  
Deer Park, Texas 77536

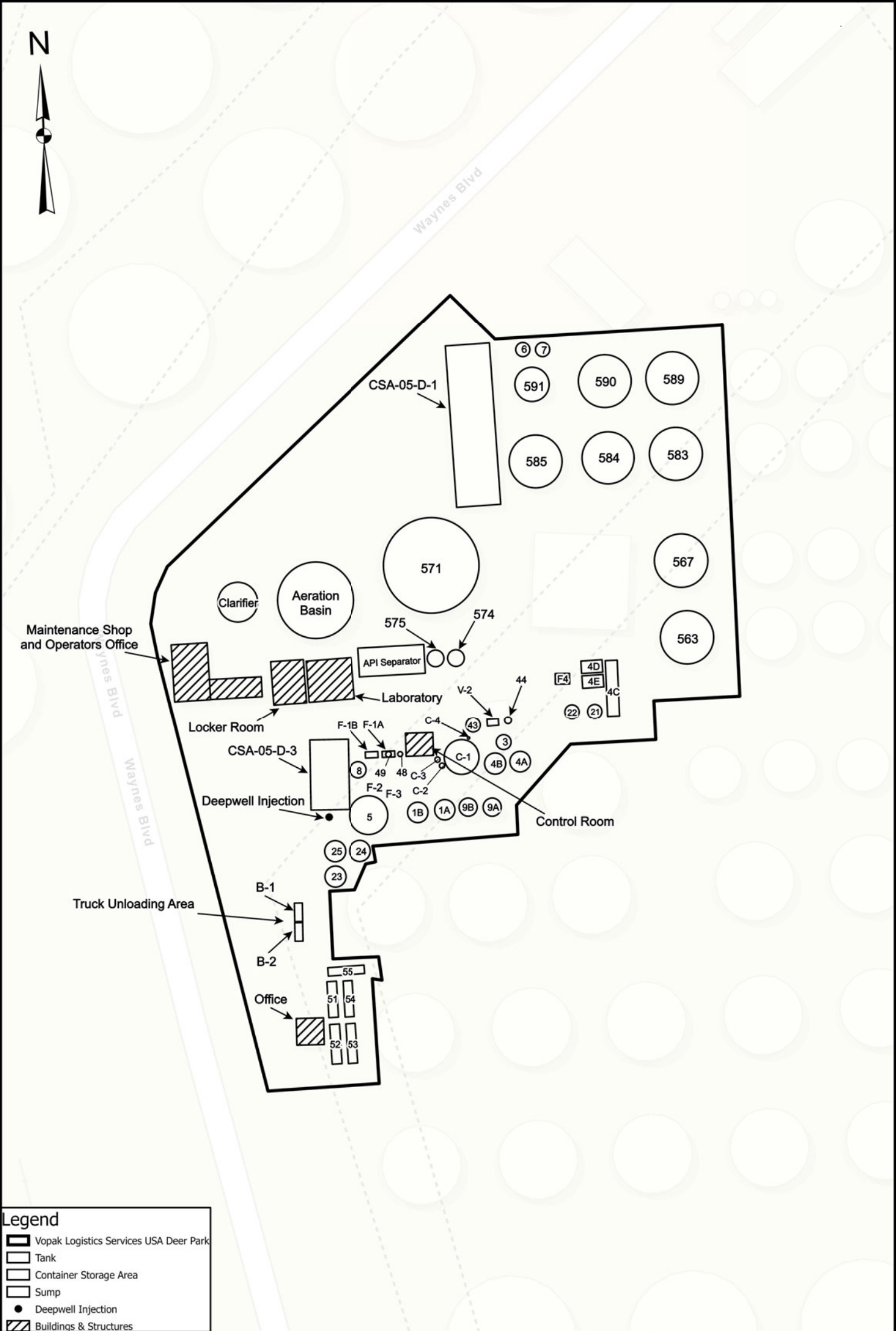
0 1,000 2,000 4,000 Feet  
Scale 1" = 2,000'

Prepared By: EngiCon Environmental, LLC

Facility Boundaries  
and  
Adjacent Waters Map

**EngiCon**  
Environmental





**Legend**

- Vopak Logistics Services USA Deer Park
- Tank
- Container Storage Area
- Sump
- Deepwell Injection
- Buildings & Structures

Source: Vopak Logistics Services USA, Inc.,  
Based on Drawings by H+M Industrial EPC, and  
Hill Country Environmental, Inc.

Note: Drawing to be used for Permitting Purposes Only

Revision No.1  
Date: January 20, 2025

Date: July 31, 2024

Vopak Logistics Services USA, Inc.  
2759 Independence Parkway South  
Deer Park, Texas 77536

0 50 100 200  
Feet  
Scale 1" = 100'

Prepared By: EngiCon Environmental, LLC

Facility Layout Plan

**EngiCon**  
Environmental

## **SECTION X – AIR EMISSION STANDARDS**

## 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 RESERVED

Does the facility have process vents and equipment subject to the requirements of 40 CFR Part 264, Subpart AA?

**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?

**If No:** please provide the regulatory exclusion/exemption(s):

**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 ☐ 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 ☐ 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 ☐ 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.

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:

RESERVED

Does the facility have a "one-stop" permit?

☐ Yes ☒ 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.

## **APPENDIX X**

### **AIR EMISSION STANDARDS**





**AIR EMISSION STANDARDS  
PART B – Section X**

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
PERMIT RENEWAL APPLICATION FOR A HAZARDOUS WASTE  
STORAGE, PROCESSING, AND DISPOSAL FACILITY**

**HAZARDOUS WASTE PERMIT NO. 50025**

**DATE: SEPTEMBER 6, 2024**

**PREPARED FOR:**

**VOPAK LOGISTICS SERVICES USA, INC.  
VOPAK LOGISTICS SERVICES USA DEER PARK  
2759 INDEPENDENCE PARKWAY SOUTH  
DEER PARK, TEXAS 77536**

<b>1.0</b>	<b>INTRODUCTION .....</b>	<b>1</b>
1.1	Basis .....	1
1.2	Purpose and Approach .....	1
<b>2.0</b>	<b>SUBPART AA – PROCESS VENTS .....</b>	<b>2</b>
<b>3.0</b>	<b>SUBPART BB – EQUIPMENT LEAKS .....</b>	<b>3</b>
<b>4.0</b>	<b>SUBPART CC – TANKS AND CONTAINERS .....</b>	<b>5</b>

## **TABLES**

Table X.A Process Vents - RESERVED

Table X.B. Equipment Leaks

Table X.C. Tanks and Containers Subject to Air

## **APPENDICES**

Appendix X.D – “One Stop” Permits (Not Applicable)

## **1.0 INTRODUCTION**

The Air Emissions Standards document is prepared for the Vopak Logistics Services USA Deer Park facility located at 2759 Independence Parkway South, Deer Park, Texas 77536 (hereafter referred to as VLS or the facility). The Air Emissions Standards document has been prepared to demonstrate compliance with the air emissions requirements, and to comply with the hazardous waste permit in accordance with Title 40 of the Code of Federal Regulations (CFR) Part 264 Subpart AA – Air Emission Standards for Process Vents, Subpart BB – Air Emission Standards for Equipment Leaks, and Subpart CC – Air Emission Standards for Tanks and Containers.

### **1.1 Basis**

In addition, the Air Emissions Standards section has been prepared in accordance with the requirements of:

- 40 CFR §264.1032 – Standards: Process Vents.
- 40 C40 CFR §264.1033 – Standards: Closed Vent Systems and Control Devices.
- 40 C40 CFR §264.1035 – Recordkeeping Requirements.
- 40 C40 CFR §264.1052 – Standards: Pumps in Light Liquid Service.
- 40 C40 CFR §264.1059 – Standards: Delay of Repair.
- 40 C40 CFR §264.1060 – Standards: Closed-Vent Systems and Control Devices.
- 40 C40 CFR §264.1064 – Recordkeeping Requirements.
- 40 C40 CFR §264.1084 – Standards: Tanks.
- 40 C40 CFR §264.1086 – Standards: Containers.
- 40 C40 CFR §264.1087 – Standards: Closed-Vent Systems and Control Devices.
- 40 C40 CFR §270.24 – Specific Part B Information Requirements for Process Vents.
- 40 C40 CFR §270.25 – Specific part B Information Requirements for Equipment.
- 40 C40 CFR §270.27 – Specific Part B information requirements for Air Emission Controls.

### **1.2 Purpose and Approach**

The Air Emissions Standards document is divided into three sections, X.A, X.B and X.C which provides the required information needed to document the facility's compliance with the respective Subpart AA, BB and CC air emissions standards as applicable to the facility. Section X.D for the “one-stop” permit is not applicable.

## **2.0 SUBPART AA – PROCESS VENTS**

VLS does not conduct distillation, fractionation, thin-film evaporation, solvent extraction, air or steam stripping operations as defined in 40 CFR §264.1031 in any unit at the facility. Therefore, Subpart AA does not apply.

Therefore Table X.A. is not applicable, and certifications associated with process vents are not required.

### 3.0 SUBPART BB – EQUIPMENT LEAKS

Table X.B provides a list of the valves, pumps, compressors, pressure relief devices, sampling connection systems and open-ended valves or lines that contain or contacts hazardous waste streams having organic concentrations of 10 percent by weight or greater.

Therefore, the certification associated with equipment leaks is provided as part of permit renewal application.

The facility maintains a recordkeeping system which tracks each record by hazardous waste management unit. For each unit, the following information is documented:

- Equipment identification number;
- Location on a plot plan;
- Type of equipment;
- Percent by weight total organics in the hazardous waste stream;
- Hazardous waste state (liquid or gas/vapor) at the equipment; and
- Method of compliance.

When leaks are detected, the equipment is marked, and until the equipment is repaired, unless the equipment is a valve and then the marker remains until no leak is detected for two consecutive months. A leak detection log is maintained in the facility operating record that includes:

- Instrument identification number;
- Operator identification number;
- Equipment identification number;
- Date evidence of leak determined;
- Date of leak detection;
- Date of each attempt to repair leak;
- Repair methods used;
- "above 10,000" if the maximum instrument reading after repair attempts is greater than or equal to 10,000;
- "repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of a leak;
- Documentation supporting delay of valve repair in accordance with 40 CFR §264.1059c;
- Signature of owner/operator who decided the repair could not be made without the unit shutting down;
- Expected date of successful repair if not within 15 calendar days; and
- Date of successful repair of the leak.

Also maintained in the facility operating record are:

- A log of applicable equipment pursuant to 40 CFR §264.1064(g);
- Information pertaining to valves pursuant to 40 CFR §264.1064(h) and (i);
- Design criteria information pursuant to 40 CFR §264.1064(j); and
- Analytical records pursuant to 40 CFR §264.1064(k).

Records of the equipment leak, and the operating information are maintained onsite for at least three years.

## 4.0 SUBPART CC – TANKS AND CONTAINERS

The facility controls organic air emissions from tanks that are used to manage hazardous waste streams having an average volatile organic concentration of 500 parts per million (ppm) at the point of origin. VLS has identified, at the time of application submittal, the following hazardous waste management units:

- Permit Unit No. 7 – Tank ID No.: 05-T-4B
- Permit Unit No. 9 – Tank ID No.: 05-T-4D
- Permit Unit No. 10 – Tank ID No.: 05-T-4E
- Permit Unit No. 18 – Tank ID No.: 05-T-21
- Permit Unit No. 19 – Tank ID No.: 05-T-22
- Permit Unit No. 65 – Tank ID No.: 05-T-39
- Permit Unit No. 66 – Tank ID No.: 05-T-40
- Permit Unit No. 67 – Tank ID No.: 05-T-41
- Permit Unit No. 68 – Tank ID No.: 05-T-42

The storage tanks listed above are equipped to control the release of volatile organic compounds using a carbon adsorption system. As such, the storage tanks are compliant with Level 2 controls in accordance with 40 CFR §264.1084(d). Therefore, the closed vent systems and control devices are inspected and monitored on a routine basis and in accordance with 40 CFR §264.1087.

Table X.C provides a list of tanks and containers subject to air emissions controls.

Therefore, the certification associated with control devices is provided as part of permit renewal application.

The facility does not have floating roof covers, and does not operate any surface impoundments.

The portable storage containers managed onsite meet the applicable Department of Transportation (DOT) packaging requirements and are kept closed at all times except when adding or removing waste. In addition, and as indicated in the Inspection Schedule, the container storage areas are inspected on a daily basis. As such, the containers are compliant with Level 1 controls in accordance with 40 CFR §264.1086(c).

Tank trucks and rail car tanks may operate in light material service and as such are subject to the Level 2 controls in accordance with 40 CFR §264.1086(d). Only those tank trucks and rail car tanks that meet the applicable DOT packaging requirements will be managed at the facility.

The facility operating record includes the information pursuant to 40 CFR §264.1089 and as applicable. Because different hazardous waste streams are managed onsite, the list of tanks subject to Subpart CC may vary, and based on the waste managed in the tanks. Records are maintained onsite for at least three years.

## CERTIFICATION

### Equipment Leaks

I, Gary Jackson, 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 9/11/24.



## CERTIFICATION

### Control Device

I, GARY JACKSON, 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 9/11/24

**TABLE X.B.**  
**EQUIPMENT LEAKS**

Table X.B. - Equipment Leaks

List all process vents covered by this application.

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00034	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	Annually by Method 21
00037	VENT	27	05-T-4B	> 10%	GAS	Monthly by Method 21
00046	VALVE	27	05-T-4B	> 10%	Light Liquid	Monthly by Method 21
00048	VALVE	27	05-T-4B	> 10%	Light Liquid	Monthly by Method 21
00049	VALVE	27	05-T-4B	> 10%	Light Liquid	Monthly by Method 21
00055	VALVE	27	05-T-4B	> 10%	Light Liquid	Annually by Method 21
00055.1	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	Annually by Method 21
00055.2	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	Annually by Method 21
00056	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	Annually by Method 21
00059	VALVE	27	05-T-4B	> 10%	Light Liquid	Monthly by Method 21
00061	VALVE	27	05-T-4B	> 10%	Light Liquid	Monthly by Method 21
00062	VALVE	27	05-T-4B	> 10%	Light Liquid	Monthly by Method 21
00063	VALVE	27	05-T-4B	> 10%	Light Liquid	Monthly by Method 21
00064	VALVE	27	05-T-4B	> 10%	Light Liquid	Monthly by Method 21
00065	VALVE	27	05-T-4B	> 10%	Light Liquid	Monthly by Method 21
00067	VALVE	27	05-T-4B	> 10%	Light Liquid	Monthly by Method 21
00035	SCONN	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00035.1	SCONN	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00036	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00037.1	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00038	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00039	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00040	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00041	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00042	SCONN	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00043	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00044	SCONN	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00045	SCONN	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00045.1	SCONN	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00046.1	SCONN	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00046.2	SCONN	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00047	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00048.1	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00048.2	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00049.1	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00049.2	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00050	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00051	SCONN	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00051.1	SCONN	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00052	SCONN	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00052.1	SCONN	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00053.1	SCONN	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00053.2	SCONN	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00054	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00057	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00058	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00059.1	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00059.2	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00060	SCONN	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00061.1	SCONN	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00061.2	SCONN	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00062.1	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00062.2	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00063.1	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00063.2	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00064.1	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00065.1	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00065.2	CONNECTOR	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00066	SCONN	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00067.1	SCONN	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring
00067.2	SCONN	27	05-T-4B	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00023	VALVE	29	05-T-4D	> 10%	Light Liquid	Monthly by Method 21
00024	VALVE	29	05-T-4D	> 10%	Light Liquid	Monthly by Method 21
00027	VALVE	29	05-T-4D	> 10%	Light Liquid	Monthly by Method 21
00031	VALVE	29	05-T-4D	> 10%	Light Liquid	Monthly by Method 21
00032	VALVE	29	05-T-4D	> 10%	Light Liquid	Monthly by Method 21
00033	VALVE	29	05-T-4D	> 10%	Light Liquid	Monthly by Method 21
00034	VALVE	29	05-T-4D	> 10%	Light Liquid	Monthly by Method 21
00201	VALVE	29	05-T-4D	> 10%	Light Liquid	Monthly by Method 21
00202	SCONN	29	05-T-4D	> 10%	Light Liquid	Annually by Method 21
00202.1	SCONN	29	05-T-4D	> 10%	Light Liquid	Annually by Method 21
00203	SCONN	29	05-T-4D	> 10%	Light Liquid	Annually by Method 21
00204	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	Annually by Method 21
00205	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	Annually by Method 21
00206	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	Annually by Method 21
00207	SCONN	29	05-T-4D	> 10%	Light Liquid	Annually by Method 21
00207.1	SCONN	29	05-T-4D	> 10%	Light Liquid	Annually by Method 21
00208	VENT	29	05-T-4D	> 10%	GAS	Annually by Method 21
00208.1	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	Annually by Method 21
00208.2	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	Annually by Method 21
00209	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	Annually by Method 21
00210	VENT	29	05-T-4D	> 10%	GAS	Annually by Method 21
00210.1	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	Annually by Method 21
00210.2	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	Annually by Method 21
00211	SCONN	29	05-T-4D	> 10%	Light Liquid	Annually by Method 21
00415	VALVE	29	05-T-4D	> 10%	Light Liquid	Monthly by Method 21
00417	VALVE	29	05-T-4D	> 10%	Light Liquid	Monthly by Method 21
00418	VALVE	29	05-T-4D	> 10%	Light Liquid	Monthly by Method 21
00022	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00023.1	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00023.2	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00024.1	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00024.2	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00025	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00026	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00027.1	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00027.2	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00028	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00029	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00030	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00031.1	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00031.2	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00032.1	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00032.2	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00033.1	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00033.2	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00034.1	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00034.2	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00035	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00036	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00194	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00195	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00196	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00197	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00198	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00199.1	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00199.2	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00200.1	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00200.2	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00201.1	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00201.2	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00415.1	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00415.2	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00416	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00416.1	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00417.1	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00417.2	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00418.1	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00418.2	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00419	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00419.1	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00419.2	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00420	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00420.1	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00420.2	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00421	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00421.1	SCONN	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00422	CONNECTOR	29	05-T-4D	> 10%	Light Liquid	AVO Monitoring
00002	VALVE	30	05-T-4E	> 10%	Light Liquid	Monthly by Method 21
00003	VALVE	30	05-T-4E	> 10%	Light Liquid	Monthly by Method 21
00005	VALVE	30	05-T-4E	> 10%	Light Liquid	Monthly by Method 21
00010	VALVE	30	05-T-4E	> 10%	Light Liquid	Monthly by Method 21
00011	VALVE	30	05-T-4E	> 10%	Light Liquid	Monthly by Method 21
00016	VALVE	30	05-T-4E	> 10%	Light Liquid	Monthly by Method 21
00017	VALVE	30	05-T-4E	> 10%	Light Liquid	Monthly by Method 21
00019	VALVE	30	05-T-4E	> 10%	Light Liquid	Monthly by Method 21
00217	VALVE	30	05-T-4E	> 10%	Light Liquid	Monthly by Method 21
00218	VALVE	30	05-T-4E	> 10%	Light Liquid	Monthly by Method 21
00219	VALVE	30	05-T-4E	> 10%	Light Liquid	Monthly by Method 21
00220	SCONN	30	05-T-4E	> 10%	Light Liquid	Annually by Method 21
00222	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	Annually by Method 21
00223	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	Annually by Method 21
00224	SCONN	30	05-T-4E	> 10%	Light Liquid	Annually by Method 21
00224.1	SCONN	30	05-T-4E	> 10%	Light Liquid	Annually by Method 21

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00225.1	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	Annually by Method 21
00225.2	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	Annually by Method 21
00226	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	Annually by Method 21
00227	VENT	30	05-T-4E	> 10%	GAS	Annually by Method 21
00227.1	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	Annually by Method 21
00227.2	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	Annually by Method 21
00423	VALVE	30	05-T-4E	> 10%	Light Liquid	Monthly by Method 21
00425	VALVE	30	05-T-4E	> 10%	Light Liquid	Monthly by Method 21
00426	VALVE	30	05-T-4E	> 10%	Light Liquid	Monthly by Method 21
00001	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00002.1	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00002.2	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00003.1	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00003.2	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00004	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00005.1	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00005.2	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00006	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00007	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00008	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00009	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00010.1	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00010.2	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00011.1	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00011.2	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00012	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00013	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00014	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00015	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00016.1	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00016.2	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring



Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00017.1	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00017.2	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00018	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00019.1	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00019.2	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00020	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00020.1	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00021	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00021.1	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00212	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00213	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00214	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00215	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00216	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00217.1	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00217.2	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00218.1	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00218.2	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00219.1	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00422.1	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00423.1	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00423.2	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00424	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00424.1	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00425.1	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00425.2	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00426.1	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00426.2	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00427	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00427.1	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00427.2	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00428	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00428.1	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00428.2	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00429	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00429.1	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00430	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00430.1	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00430.2	SCONN	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00431	CONNECTOR	30	05-T-4E	> 10%	Light Liquid	AVO Monitoring
00058	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00062	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00068.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00068.2	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00069	SCONN	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00070.1	SCONN	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00070.2	SCONN	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00071.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00071.2	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00072	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00073.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00073.2	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00074	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00075	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00076.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00076.2	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00078	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00080	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00082	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00085	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00086.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00086.2	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00099	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00103	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00104.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00104.2	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00105.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00105.2	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00106.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00106.2	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00107.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00107.2	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00134	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00135	CONNECTOR 211	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00137	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00139	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00144	SCONN	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00145.1	SCONN	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00145.2	SCONN	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00146.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00146.2	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00147	SCONN	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00148.1	SCONN	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00148.2	SCONN	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00154	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00155.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00155.2	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00156	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00157.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00157.2	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00158	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00164	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00165	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00167.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00167.2	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00168.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00168.2	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00173	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00174	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00175	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00179.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00179.2	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00180	SCONN	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00181.1	SCONN	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00181.2	SCONN	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00185	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00187	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00206.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00207	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00209	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00210.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00210.2	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00211.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00212	SCONN	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00213.1	SCONN	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00213.2	SCONN	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00214	SCONN	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00215.1	SCONN	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00215.2	SCONN	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00216.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00216.2	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00217.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00217.2	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00219	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00220.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00222.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00240	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00245.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00246.1	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00247.1	SCONN	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00248	CONNECTOR	31	05-T-5	> 10%	Light Liquid	AVO Monitoring
00067	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00069	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00071	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00073	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00076	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00078	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00080	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00081	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00082	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00083	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00084	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00086	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00088	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00090	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00093	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00094	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00096	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00097	PUMP	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00098	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00099	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00100	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00102	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00107	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00238	VENT	38	05-T-21	> 10%	GAS	Monthly by Method 21

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00239	CONNECTOR	38	05-T-21	> 10%	Light Liquid	Annually by Method 21
00263	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00289	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00296	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00298	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00302	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00439	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00441	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00443	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00447	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00452	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00002	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00009	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00010	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00012	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00013	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00015	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00016	PUMP	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00017	PUMP	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00019	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00021	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00023	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00025	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00028	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00034	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00038	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00043	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00046	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00047	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00049	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00052	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21



Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00055	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00056	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00058	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00061	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00062	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00063	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00065	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00069	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00074	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00075	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00080	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00083	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00087	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00093	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00098	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00099	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00100	VALVE	38	05-T-21	> 10%	Light Liquid	Monthly by Method 21
00067.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00067.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00068	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00069.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00069.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00070	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00071.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00071.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00072	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00073.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00074	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00075	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00075.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00076.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00076.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00077	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00078.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00078.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00079	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00080.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00080.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00081.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00081.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00082.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00082.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00083.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00083.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00084.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00084.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00085	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00086.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00086.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00087	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00088.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00088.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00089	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00089.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00090.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00090.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00091.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00091.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00092	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00093.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00093.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00094.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00094.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring



Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00095	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00096.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00096.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00098.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00098.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00099.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00099.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00101	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00102.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00102.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00103	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00104	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00107.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00107.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00235	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00236	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00237	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00238.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00240	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00241	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00257	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00258	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00259	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00260	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00261	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00262	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00263.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00263.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00264	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00289.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00289.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00290	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00291	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00291.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00296.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00296.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00297	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00298.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00299	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00299.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00300	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00301	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00302.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00302.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00303	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00304	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00305	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00306	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00307	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00308.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00438	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00438.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00439.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00439.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00440	CAP	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00441.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00441.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00442	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00443.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00443.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00444	CAP	38	05-T-21	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00445	CAP	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00446	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00447.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00447.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00448	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00449	CAP	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00450	CAP	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00451	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00452.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00452.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00453	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00453.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00001	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00002.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00002.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00003	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00003.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00004	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00004.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00005	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00006	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00007	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00008	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00008.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00008.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00009.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00009.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00010.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00010.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00011.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00011.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00012.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00012.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00013.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00013.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00014	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00015.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00015.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00018	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00019.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00019.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00020	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00021.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00021.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00022	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00023.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00023.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00024	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00025.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00025.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00026	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00027	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00028.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00028.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00029	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00030	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00031	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00032	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00033	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00033.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00034.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00034.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00035	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00036	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00037	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00037.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00038.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00038.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00039	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00039.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00040	CAP	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00041	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00042	FILTER	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00042.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00042.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00043.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00043.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00044	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00045	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00046.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00046.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00047.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00047.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00048	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00049.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00049.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00050	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00051	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00051.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00052.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00052.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00053	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00054	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00055.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00055.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00056.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00056.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00057	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00057.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00058.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00058.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00059	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00060	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00061.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00061.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00062.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00062.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00063.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00063.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00064	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00064.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00065.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00065.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00066	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00067	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00068	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00069.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00069.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00070	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00071	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00072	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00073	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00074.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00075.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring



Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00075.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00076	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00077.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00077.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00078	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00079	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00080.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00080.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00081	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00082	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00083.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00083.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00084	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00085	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00085.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00085.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00086	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00086.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00087.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00087.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00088	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00088.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00088.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00089	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00090	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00090.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00091	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00091.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00092	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00092.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00093.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00093.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00094	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00094.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00095	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00095.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00096	CAP	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00097	CAP	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00098.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00098.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00099.1	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00099.2	SCONN	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00100.1	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00100.2	CONNECTOR	38	05-T-21	> 10%	Light Liquid	AVO Monitoring
00108	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00128	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00130	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00131	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00133	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00136	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00137	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00140	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00142	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00143	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00144	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00145	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00146	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00147	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00151	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00152	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00153	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00154	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21



Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00155	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00159	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00161	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00162	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00166	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00167	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00168	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00170	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00171	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00245	VENT	39	05-T-22	> 10%	GAS	Monthly by Method 21
00246	CONNECTOR	39	05-T-22	> 10%	Light Liquid	Annually by Method 21
00267	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00271	CONNECTOR	39	05-T-22	> 10%	Light Liquid	Annually by Method 21
00272	CONNECTOR	39	05-T-22	> 10%	Light Liquid	Annually by Method 21
00273	CONNECTOR	39	05-T-22	> 10%	Light Liquid	Annually by Method 21
00274	CONNECTOR	39	05-T-22	> 10%	Light Liquid	Annually by Method 21
00308	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00312	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00314	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00318	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00320	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00326	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00328	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00432	VALVE	39	05-T-22	> 10%	Light Liquid	Monthly by Method 21
00108.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00108.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00109.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00109.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00110.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00110.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00111	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00112	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00113	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00114.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00114.2	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00115.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00115.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00116.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00116.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00118.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00118.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00119	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00120.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00120.2	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00121	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00122.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00122.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00123.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00124	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00125	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00125.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00126	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00126.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00126.2	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00127	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00127.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00128.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00128.2	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00129	CAP	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00130.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00130.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00131.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00131.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00132	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00133.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00133.2	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00134	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00135	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00136.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00136.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00137.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00137.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00138	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00139	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00139.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00140.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00140.2	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00141	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00142.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00142.2	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00143.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00143.2	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00144.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00144.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00145.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00145.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00146.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00146.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00147.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00147.2	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00148	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00149	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00150	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00151.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00151.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00152.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00152.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00153.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00154.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00155.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00155.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00156	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00156.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00157	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00157.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00158	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00159.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00159.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00160	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00160.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00161.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00161.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00162.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00162.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00163	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00164	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00165	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00166.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00166.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00167.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00167.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00168.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00168.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00169	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00170.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00170.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00171.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00171.2	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00242	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00243	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00244	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00245.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00247	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00248	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00249	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00250	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00251	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00252	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00253	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00254	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00255	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00256	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00265	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00266	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00267.1	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00267.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00268	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00269	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00270	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00275	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00308.2	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00309	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00310	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00311	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00312.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00312.2	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00313	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00314.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00314.2	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00315	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00315.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00316	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00317	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00317.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00317.2	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00318.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00318.2	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00319	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00320.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00320.2	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00321	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00322	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00322.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00327	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00328.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00328.2	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00329	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00329.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00329.2	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00330	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00433	CONNECTOR	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00434	CAP	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00435	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00437	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00437.1	SCONN	39	05-T-22	> 10%	Light Liquid	AVO Monitoring
00153	VALVE	49	05-T-563	> 10%	Light Liquid	Annually by Method 21



Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00153.1	CONNECTOR	49	05-T-563	> 10%	Light Liquid	Annually by Method 21
00153.2	CONNECTOR	49	05-T-563	> 10%	Light Liquid	Annually by Method 21
00146	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00147	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00148	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00149	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00150	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00151	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00152	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00154.1	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00154.2	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00155.1	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00155.2	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00171.1	SCONN	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00171.2	SCONN	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00172	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00173.1	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00173.2	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00174	CAP	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00175.1	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00175.2	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00176.1	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00176.2	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00177	SCONN	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00178	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00179	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00180.1	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00180.2	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00181.1	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00181.2	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00182.1	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00182.2	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00183.1	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00183.2	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00184	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00185.1	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00185.2	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00186.1	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00186.2	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00187	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00188	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00189	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00193.1	SCONN	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00194.1	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00194.2	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00195.1	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00195.2	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00196	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00197	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00198.1	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00198.2	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00199.1	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00199.2	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00200.1	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00200.2	CONNECTOR	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00201	SCONN	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00202.1	SCONN	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00202.2	SCONN	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00203	CAP	49	05-T-563	> 10%	Light Liquid	AVO Monitoring
00145	VALVE	50	05-T-567	> 10%	Light Liquid	Annually by Method 21
00145.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	Annually by Method 21
00145.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	Annually by Method 21



Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00281	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00282	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00283.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00283.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00284	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00285	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00286.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00286.2	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00287	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00287.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00288	CAP	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00059	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00060.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00060.2	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00061	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00132	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00136	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00141	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00142.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00142.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00143	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00149	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00150	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00151	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00065	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00066	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00067	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00068.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00068.2	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00069.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00069.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00070	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00071.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00071.2	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00072	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00073	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00073.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00074.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00074.2	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00075	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00076	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00077.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00077.2	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00078.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00078.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00079.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00079.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00080.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00080.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00081.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00081.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00082.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00082.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00083.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00083.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00084.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00084.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00085	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00085.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00086.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00086.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00087.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00087.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00088.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00088.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00089	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00090	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00091	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00092.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00092.2	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00094.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00094.2	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00095	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00096	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00097	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00098	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00098.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00098.2	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00099.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00099.2	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00100	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00100.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00101	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00101.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00103.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00103.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00104.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00105	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00106.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00106.2	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00107	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00107.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00108.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00108.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00109	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00110.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00110.2	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00111.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00111.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00112	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00113.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00113.2	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00114.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00114.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00115.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00115.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00116	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00117.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00117.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00118.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00118.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00119	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00120.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00120.2	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00121.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00121.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00122.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00122.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00123	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00124	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00125	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00126.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00126.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00127.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00128.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00128.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00129.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00129.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00130	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00131	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00132.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00133	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00134	AGITATOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00135	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00136	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00137	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00138	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00139	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00140	VENT	50	05-T-567	> 10%	GAS	AVO Monitoring
00140.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00141	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00142	VENT	50	05-T-567	> 10%	GAS	AVO Monitoring
00142.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00143	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00144	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00144.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00156	CAP	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00157	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00158.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00158.2	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00159	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00160.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00160.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00161.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00161.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00162.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00162.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00163	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00164.1	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00164.2	SCONN	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00165.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00165.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00166.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00166.2	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00167	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00167.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00168	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00169	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00169.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00170	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00170.1	CONNECTOR	50	05-T-567	> 10%	Light Liquid	AVO Monitoring
00366	VALVE	52	01-T-583	> 10%	Light Liquid	Annually by Method 21
00367	VALVE	52	01-T-583	> 10%	Light Liquid	Annually by Method 21
00367.1	CONNECTOR	52	01-T-583	> 10%	Light Liquid	Annually by Method 21
00367.2	CONNECTOR	52	01-T-583	> 10%	Light Liquid	Annually by Method 21
00373	VALVE	57	01-T-590	> 10%	Light Liquid	Annually by Method 21
00373.1	CONNECTOR	57	01-T-590	> 10%	Light Liquid	Annually by Method 21
00373.2	CONNECTOR	57	01-T-590	> 10%	Light Liquid	Annually by Method 21
00374	VALVE	57	01-T-590	> 10%	Light Liquid	Annually by Method 21
00374.1	CONNECTOR	57	01-T-590	> 10%	Light Liquid	Annually by Method 21
00374.2	CONNECTOR	57	01-T-590	> 10%	Light Liquid	Annually by Method 21
00373	VALVE	57	01-T-590	> 10%	Light Liquid	Annually by Method 21
00373.1	CONNECTOR	57	01-T-590	> 10%	Light Liquid	Annually by Method 21
00373.2	CONNECTOR	57	01-T-590	> 10%	Light Liquid	Annually by Method 21
00374	VALVE	57	01-T-590	> 10%	Light Liquid	Annually by Method 21
00374.1	CONNECTOR	57	01-T-590	> 10%	Light Liquid	Annually by Method 21



Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00373	VALVE	57	01-T-590	> 10%	Light Liquid	Annually by Method 21
00373.1	CONNECTOR	57	01-T-590	> 10%	Light Liquid	Annually by Method 21
00373.2	CONNECTOR	57	01-T-590	> 10%	Light Liquid	Annually by Method 21
00374	VALVE	57	01-T-590	> 10%	Light Liquid	Annually by Method 21
00374.1	CONNECTOR	57	01-T-590	> 10%	Light Liquid	Annually by Method 21
00374.2	CONNECTOR	57	01-T-590	> 10%	Light Liquid	Annually by Method 21
00372	VALVE	58	01-T-591	> 10%	Light Liquid	Annually by Method 21
00372.1	CONNECTOR	57	01-T-591	> 10%	Light Liquid	Annually by Method 21
00372.2	CONNECTOR	57	01-T-591	> 10%	Light Liquid	Annually by Method 21
00067	CONNECTOR	63	05-T-51	> 10%	Light Liquid	Annually by Method 21
00068	VENT	63	05-T-51	> 10%	GAS	Annually by Method 21
00068.1	CONNECTOR	63	05-T-51	> 10%	Light Liquid	Annually by Method 21
00069	CONNECTOR	63	05-T-51	> 10%	Light Liquid	Annually by Method 21
00070	CONNECTOR	63	05-T-51	> 10%	Light Liquid	Annually by Method 21
00071	CONNECTOR	63	05-T-51	> 10%	Light Liquid	Annually by Method 21
00063	SCONN	63	05-T-51	> 10%	Light Liquid	AVO Monitoring
00064.1	CONNECTOR	63	05-T-51	> 10%	Light Liquid	AVO Monitoring
00064.2	CONNECTOR	63	05-T-51	> 10%	Light Liquid	AVO Monitoring
00065	CONNECTOR	63	05-T-51	> 10%	Light Liquid	AVO Monitoring
00066	CONNECTOR	63	05-T-51	> 10%	Light Liquid	AVO Monitoring
00072	CONNECTOR	63	05-T-51	> 10%	Light Liquid	AVO Monitoring
00073	SCONN	63	05-T-51	> 10%	Light Liquid	AVO Monitoring
00074.1	SCONN	63	05-T-51	> 10%	Light Liquid	AVO Monitoring
00074.2	SCONN	63	05-T-51	> 10%	Light Liquid	AVO Monitoring
00053	CONNECTOR	64	05-T-52	> 10%	Light Liquid	Annually by Method 21
00054	VENT	64	05-T-52	> 10%	GAS	Annually by Method 21
00054.1	CONNECTOR	64	05-T-52	> 10%	Light Liquid	Annually by Method 21
00055	CONNECTOR	64	05-T-52	> 10%	Light Liquid	Annually by Method 21
00056	CONNECTOR	64	05-T-52	> 10%	Light Liquid	Annually by Method 21
00052	CONNECTOR	64	05-T-52	> 10%	Light Liquid	AVO Monitoring
00057	SCONN	64	05-T-52	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00057.1	SCONN	64	05-T-52	> 10%	Light Liquid	AVO Monitoring
00058.1	SCONN	64	05-T-52	> 10%	Light Liquid	AVO Monitoring
00058.2	SCONN	64	05-T-52	> 10%	Light Liquid	AVO Monitoring
00059	CONNECTOR	64	05-T-52	> 10%	Light Liquid	AVO Monitoring
00060	SCONN	64	05-T-52	> 10%	Light Liquid	AVO Monitoring
00061.1	SCONN	64	05-T-52	> 10%	Light Liquid	AVO Monitoring
00061.2	SCONN	64	05-T-52	> 10%	Light Liquid	AVO Monitoring
00062	SCONN	64	05-T-52	> 10%	Light Liquid	AVO Monitoring
00062.1	SCONN	64	05-T-52	> 10%	Light Liquid	AVO Monitoring
00048	CONNECTOR	65	05-T-53	> 10%	Light Liquid	Annually by Method 21
00049	CONNECTOR	65	05-T-53	> 10%	Light Liquid	Annually by Method 21
00050	VENT	65	05-T-53	> 10%	GAS	Annually by Method 21
00050.1	CONNECTOR	65	05-T-53	> 10%	Light Liquid	Annually by Method 21
00051	CONNECTOR	65	05-T-53	> 10%	Light Liquid	Annually by Method 21
00029	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00029.1	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00030.1	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00030.2	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00031	CONNECTOR	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00032	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00033	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00034.1	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00034.2	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00035	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00036.1	CONNECTOR	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00036.2	CONNECTOR	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00037.1	CONNECTOR	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00037.2	CONNECTOR	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00038	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00038.1	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00038.2	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring



Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00039.1	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00039.2	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00040	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00040.1	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00041.1	CONNECTOR	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00041.2	CONNECTOR	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00042.1	CONNECTOR	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00042.2	CONNECTOR	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00043	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00043.1	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00044.1	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00044.2	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00045	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00045.1	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00046.1	CONNECTOR	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00046.2	CONNECTOR	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00047	CONNECTOR	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00077	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00078.1	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00078.2	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00079.1	CONNECTOR	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00079.2	CONNECTOR	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00080	SCONN	65	05-T-53	> 10%	Light Liquid	AVO Monitoring
00026	CONNECTOR	66	05-T-54	> 10%	Light Liquid	Annually by Method 21
00027	VENT	66	05-T-54	> 10%	GAS	Annually by Method 21
00027.1	CONNECTOR	66	05-T-54	> 10%	Light Liquid	Annually by Method 21
00028	CONNECTOR	66	05-T-54	> 10%	Light Liquid	Annually by Method 21
00014	SCONN	66	05-T-54	> 10%	Light Liquid	AVO Monitoring
00014.1	SCONN	66	05-T-54	> 10%	Light Liquid	AVO Monitoring
00015.1	SCONN	66	05-T-54	> 10%	Light Liquid	AVO Monitoring
00015.2	SCONN	66	05-T-54	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00016	CONNECTOR	66	05-T-54	> 10%	Light Liquid	AVO Monitoring
00017	SCONN	66	05-T-54	> 10%	Light Liquid	AVO Monitoring
00018.1	SCONN	66	05-T-54	> 10%	Light Liquid	AVO Monitoring
00018.2	SCONN	66	05-T-54	> 10%	Light Liquid	AVO Monitoring
00019	SCONN	66	05-T-54	> 10%	Light Liquid	AVO Monitoring
00019.1	SCONN	66	05-T-54	> 10%	Light Liquid	AVO Monitoring
00020.1	CONNECTOR	66	05-T-54	> 10%	Light Liquid	AVO Monitoring
00020.2	CONNECTOR	66	05-T-54	> 10%	Light Liquid	AVO Monitoring
00021.1	CONNECTOR	66	05-T-54	> 10%	Light Liquid	AVO Monitoring
00021.2	CONNECTOR	66	05-T-54	> 10%	Light Liquid	AVO Monitoring
00022.1	CONNECTOR	66	05-T-54	> 10%	Light Liquid	AVO Monitoring
00022.2	CONNECTOR	66	05-T-54	> 10%	Light Liquid	AVO Monitoring
00023.1	CONNECTOR	66	05-T-54	> 10%	Light Liquid	AVO Monitoring
00023.2	CONNECTOR	66	05-T-54	> 10%	Light Liquid	AVO Monitoring
00024.1	CONNECTOR	66	05-T-54	> 10%	Light Liquid	AVO Monitoring
00024.2	CONNECTOR	66	05-T-54	> 10%	Light Liquid	AVO Monitoring
00025	CONNECTOR	66	05-T-54	> 10%	Light Liquid	AVO Monitoring
00076.1	CONNECTOR	66	05-T-54	> 10%	Light Liquid	AVO Monitoring
00076.2	CONNECTOR	66	05-T-54	> 10%	Light Liquid	AVO Monitoring
00011	CONNECTOR	67	05-T-55	> 10%	Light Liquid	Annually by Method 21
00001.1	CONNECTOR	67	05-T-55	> 10%	Light Liquid	AVO Monitoring
00001.2	CONNECTOR	67	05-T-55	> 10%	Light Liquid	AVO Monitoring
00002.1	CONNECTOR	67	05-T-55	> 10%	Light Liquid	AVO Monitoring
00002.2	CONNECTOR	67	05-T-55	> 10%	Light Liquid	AVO Monitoring
00003.1	CONNECTOR	67	05-T-55	> 10%	Light Liquid	AVO Monitoring
00003.2	CONNECTOR	67	05-T-55	> 10%	Light Liquid	AVO Monitoring
00004.1	CONNECTOR	67	05-T-55	> 10%	Light Liquid	AVO Monitoring
00004.2	CONNECTOR	67	05-T-55	> 10%	Light Liquid	AVO Monitoring
00005	SCONN	67	05-T-55	> 10%	Light Liquid	AVO Monitoring
00005.1	SCONN	67	05-T-55	> 10%	Light Liquid	AVO Monitoring
00006.1	SCONN	67	05-T-55	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00006.2	SCONN	67	05-T-55	> 10%	Light Liquid	AVO Monitoring
00007	CONNECTOR	67	05-T-55	> 10%	Light Liquid	AVO Monitoring
00008	SCONN	67	05-T-55	> 10%	Light Liquid	AVO Monitoring
00009.1	SCONN	67	05-T-55	> 10%	Light Liquid	AVO Monitoring
00009.2	SCONN	67	05-T-55	> 10%	Light Liquid	AVO Monitoring
00010	CONNECTOR	67	05-T-55	> 10%	Light Liquid	AVO Monitoring
00012	CONNECTOR	67	05-T-55	> 10%	Light Liquid	AVO Monitoring
00013	VENT	67	05-T-55	> 10%	GAS	AVO Monitoring
00013.1	CONNECTOR	67	05-T-55	> 10%	Light Liquid	AVO Monitoring
00075.1	CONNECTOR	67	05-T-55	> 10%	Light Liquid	AVO Monitoring
00075.2	CONNECTOR	67	05-T-55	> 10%	Light Liquid	AVO Monitoring
00172	CONNECTOR	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00173	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00174.1	CONNECTOR	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00174.2	CONNECTOR	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00175.1	CONNECTOR	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00175.2	CONNECTOR	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00176	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00176.1	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00177.1	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00177.2	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00178.1	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00178.2	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00179	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00179.1	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00180	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00181	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00182	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00182.1	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00183.1	CONNECTOR	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00183.2	CONNECTOR	80	05-F-4	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00184.1	CONNECTOR	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00184.2	CONNECTOR	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00185	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00185.1	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00186	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00186.1	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00187.1	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00187.2	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00188	CONNECTOR	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00189.1	CONNECTOR	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00189.2	CONNECTOR	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00190	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00190.1	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00191	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00191.1	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00192.1	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00192.2	SCONN	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00193	CONNECTOR	80	05-F-4	> 10%	Light Liquid	AVO Monitoring
00109.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00109.2	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00110.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00111	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00114.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00115.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00115.2	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00116.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00116.2	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00117	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00118	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00119	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00120.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00120.2	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00025	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00025.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00025.2	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00026.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00026.2	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00029	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00030	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00030.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00031	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00032	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00032.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00033.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00033.2	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00034	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00035	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00035.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00036.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00036.2	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00037.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00037.2	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00038.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00038.2	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00039	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00040	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00041.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00041.2	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00042.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00042.2	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00043.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00043.2	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00044.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00044.2	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00045	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00046.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00047.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00047.2	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00048	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00048.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00049	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00050.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00050.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00051	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00051.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00052	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00053.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00053.2	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00054.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00054.2	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00055	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00056	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00057	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00058	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00059.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00059.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00060	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00061	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00095	VENT	81	05-T-574	> 10%	GAS	AVO Monitoring
00095.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00096	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00097	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00098	VENT	81	05-T-574	> 10%	GAS	AVO Monitoring
00098.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring



Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00099	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00100.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00100.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00101	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00102	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00103	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00104	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00107.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00107.2	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00110	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00111.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00111.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00112	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00112.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00114	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00114.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00115.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00115.2	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00116.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00117	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00117.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00118	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00119	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00120.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00120.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00121.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00133	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00134	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00134.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00135	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00135.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00136.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00136.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00137	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00137.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00137.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00138	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00138.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00138.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00139.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00139.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00140	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00140.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00140.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00141.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00141.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00142.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00142.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00143	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00143.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00143.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00144.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00144.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00145.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00145.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00146	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00147	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00148	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00149	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00150	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00151	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00152	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring



Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00153	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00154	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00155	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00156	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00157	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00158	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00158.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00159	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00160.1	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00160.2	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00161	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00161.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00162	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00163	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00163.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00163.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00164	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00164.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00164.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00165	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00165.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00166	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00166.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00166.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00168	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00168.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00168.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00169	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00169.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00169.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00170	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00170.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00170.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00171	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00171.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00171.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00172	CONNECTOR	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00172.1	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00172.2	SCONN	81	05-T-574	> 10%	Light Liquid	AVO Monitoring
00001	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00002.1	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00002.2	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00003.1	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00003.2	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00004.1	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00004.2	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00005	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00006	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00006.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00007	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00008	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00008.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00009.1	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00009.2	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00010	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00010.1	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00010.2	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00011.1	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00011.2	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00012	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00013.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00013.2	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00014.1	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00014.2	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00015	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00016.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00016.2	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00017	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00017.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00018	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00018.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00019	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00021.1	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00021.2	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00022	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00023	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00024.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00024.2	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00027	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00028	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00028.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00062	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00063	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00064.1	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00064.2	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00065.1	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00065.2	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00066	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00067	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00068.1	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00068.2	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00069	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00069.1	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00070	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00071.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00071.2	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00072	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00072.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00073.1	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00073.2	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00074.1	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00075.1	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00075.2	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00076	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00077.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00077.2	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00078	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00079.1	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00079.2	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00080	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00081.1	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00081.2	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00082	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00083	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00084	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00085	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00086	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00087	VENT	82	05-T-575	> 10%	GAS	AVO Monitoring
00087.1	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00088	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00089	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00090	VENT	82	05-T-575	> 10%	GAS	AVO Monitoring
00090.1	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00091	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00092.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00092.2	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00093	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00094	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00108.1	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00108.2	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00122.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00122.2	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00123	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00123.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00123.2	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00124.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00124.2	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00125.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00125.2	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00126	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00127	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00127.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00128.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00128.2	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00129	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00129.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00129.2	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00130	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00131	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00132.1	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00132.2	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00167	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00167.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00173	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00174.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring

Table X.B. - Equipment Leaks

Equipment I.D. No.	Equipment Type	Waste Management Unit N.O.R. No.	Waste Management Unit Name	% by Weight Total Organics in Haz. Waste Stream	Waste State (gas, vapor, liquid)	Method of Compliance
00174.2	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00175.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00175.2	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00176	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00176.1	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00176.2	SCONN	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00177.1	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00177.2	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring
00178	CONNECTOR	82	05-T-575	> 10%	Light Liquid	AVO Monitoring

**TABLE X.C**  
**TANKS AND CONTAINERS SUBJECT TO AIR**

Permit No. 50025

Permittee: Vopak Logistics Services USA, Inc.

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**Table X.C. - Tanks, Surface Impoundments, and Containers Subject to Air Emission Controls**

List all units covered by this application

Permit Unit No.	Tanks	Design Capacity (Cubic Meters)	Hazardous Waste Maximum Organic Vapor Pressure <sup>1</sup> (Kilopascals)	Tank Used in Waste Stabilization Process (Y, N)	Tank Level Control (1, 2) <sup>2</sup>	Identify Tank Level 2 Control Tank Type and Control Device Type <sup>3</sup>
7	05-T-4B	79.5	Varies	N	2	Carbon Adsorption System
9	05-T-4D	17.5	Varies	N	2	Carbon Adsorption System
10	05-T-4E	17.5	Varies	N	2	Carbon Adsorption System
18	05-T-21	75.33	Varies	N	2	Carbon Adsorption System
19	05-T-22	75.33	Varies	N	2	Carbon Adsorption System
65	05-T-39	76.86	Varies	N	2	Carbon Adsorption System
66	05-T-40	76.86	Varies	N	2	Carbon Adsorption System
67	05-T-41	76.86	Varies	N	2	Carbon Adsorption System
68	05-T-42	76.86	Varies	N	2	Carbon Adsorption System
Permit Unit No.	Surface Impoundments	Control Type (Floating Membrane/ Cover Vented through Closed Vent System to Control Device) <sup>3</sup>				
N/A	N/A	N/A				



Permit Unit No.	Surface Impoundments	Control Type (Floating Membrane/ Cover Vented through Closed Vent System to Control Device) <sup>3</sup>
N/A	N/A	N/A

Permit Unit No.	Container Storage Areas	Container Design Capacity (Cubic Meters)	In Light Material Service? (Y/N)	Container Level Standard <sup>2</sup> (1,2,3)	Container Level Standard 3 Control Types (Closed-Vent System/ Enclosure, Control Device Type) <sup>3</sup>
48	05-D-1	>0.1 m <sup>3</sup> & ≤0.46 m <sup>3</sup> and > 0.46 m <sup>3</sup>	Y	1,2	N/A
50	05-D-3	> 0.46 m <sup>3</sup>	N	1	N/A

1. Applicable to Tank Level 1 controls determined using procedures in 40 CFR 264.1083(c). If the tank is heated, see 40 CFR 264.1084(b)(ii).
2. See 40 CFR 264.1084(c) and (d) for tanks and 40 CFR 264.1086(b) for containers.
3. See 40 CFR 264.1084(d)(1)-(5) for tanks, 40 CFR 264.1087(c)(1) for control devices, 40 CFR 264.1085(b) for surface impoundments, and 40 CFR 264.1086(c), (d), and (e) for containers.

**APPENDIX X.D**  
**“ONE STOP” PERMIT**  
**(NOT APPLICABLE)**

**SECTION XI – COMPLIANCE PLAN  
(NOT APPLICABLE)**

## XI. Compliance Plan

RESERVED

## **SECTION XII – HAZARDOUS WASTE PERMIT APPLICATION FEE**

## 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.

- 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<sup>1</sup> modification of a

hazardous waste permit is \$100 plus the notice fee of \$50.



**Table XII.A. - Hazardous Waste Units (For Application Fee Calculations)**

Verbal Description of Unit	Rated Capacity	Surface Acreage <sup>1</sup>	# of Unit Types <sup>2</sup>	Identical Unit Justification <sup>3</sup>
05-D-1	153,120 gallons		1	
05-D-3	49,692 gallons		1	
05-T-1B	50,000 gallons		1	
05-T-3	20,000 gallons		1	
05-T-4B	21,000 gallons		1	
05-T-4D & 05-T-4E	4,625 gallons		1	Identical Units
05-T-5	200,000 gallons		1	
05-T-6	21,150 gallons		1	
05-T-7	20,000 gallons		1	
05-T-8	20,305 gallons		1	
05-T-9A	24,000 gallons		1	
05-T-9B	21,000 gallons		1	
05-T-21 & 05-T-22	19,900 gallons		1	Identical Units
05-T-23, T-24 & T-25	20,000 gallons		1	Identical Units
05-T-39 & 05-T-40	20,305 gallons		1	Identical Units
05-T-41 & 05-T-42	20,305 gallons		1	Identical Units
05-T-43	15,994 gallons		1	
05-T-44	2,632 gallons		1	
05-T-48	1,452 gallons		1	
05-T-49	2,663 gallons		1	
05-T-51	11,700 gallons		1	

**Table XII.A. - Hazardous Waste Units (For Application Fee Calculations)**

05-T-52	12,000 gallons		1	
05-T-53	10,100 gallons		1	
05-T-54 & 05-T-55	10,400 gallons		1	Identical Units
05-T-574 & T-575	20,305 gallons		1	Identical Units
05-T-563 & T-567	504,000 gallons		1	Identical Units
05-T-583 & T-589	504,000 gallons		Same as above	Identical Units
05-T-590	504,000 gallons		Same as above	Identical Units
05-T-591	126,000 gallons		1	
05-F-1A & F-1B	958 gallons		1	Identical Units
F-2 & F-3	24 gallons		1	Identical Units
F-4	400 gallons		1	Identical Units
05-C-1	74,000 gallons		1	
05-C-2	1,175 gallons		1	
05-C-3	2,277 gallons		1	
05-C-4	288 gallons		1	
05-B-1 & 05-B-2	7,687 gallons		1	Identical Units
05-V-2	37 gallons		1	
Site Evaluation		5 acres		
		Total <sup>4</sup> 5 acres	Total <sup>4</sup> 36	

**Note: Identical Units are similar in material, design and capacity, and manage similar wastes.**

1. Number of calculated acres.
2. Enter number of units except for units identical in type and use which only count toward a single \$500.00 fee.
3. Explain justification for any units claimed as identical in type and use.
4. Enter these totals on the worksheet.

### Table XII.B. - Hazardous Waste Permit Application Fee Worksheet

Name of Facility: \_\_\_\_\_

Solid Waste Registration Number: \_\_\_\_\_

1. Process Analysis - \$1,000..... \$ \_\_\_\_\_

2. Facility Management Analysis - \$500..... \$ \_\_\_\_\_

3. Unit Analysis - \_\_\_\_\_ units @ \$500 per unit..... \$ \_\_\_\_\_

4. Site Evaluation - \_\_\_\_\_ acres @ \$100 per acre..... \$ \_\_\_\_\_

(Maximum of 300 acres)

5. Minor amendment, Class 1, or Class 1<sup>1</sup> modification - \$100..... \$ \_\_\_\_\_

6. Cost of Providing Notice - \$50 (+ \$15 for a renewal)..... \$ \_\_\_\_\_

**Pay This Amount**

**Total \$** \_\_\_\_\_

Pay Online through ePay portal [www3.tceq.texas.gov/epay/](http://www3.tceq.texas.gov/epay/)

Enter ePay Trace Number: \_\_\_\_\_

For Payment by check, make checks Payable To:

Texas Commission on Environmental Quality - Fund 549

*(your canceled check will be your receipt)*

Complete And Return With Payment To:

Texas Commission on Environmental Quality  
Financial Administration Division - MC 214  
P.O. BOX 13088  
Austin, Texas 78711-3088

The applicant's fees are subject to evaluation by the technical staff of the Texas Commission on Environmental Quality (TCEQ). However, the TCEQ reserves the right to assess further fees as may be necessitated.

Please do not submit a photocopy of the check (or equivalent transaction submittal) with your application packet but provide only the following account information:

Check No.	Date of Check	Check Amount

**SECTION XIII – CONFIDENTIAL MATERIALS  
(NOT APPLICABLE)**

### **XIII. Confidential Material**

RESERVED